

Kateryna Shkarina (University of Lausanne)

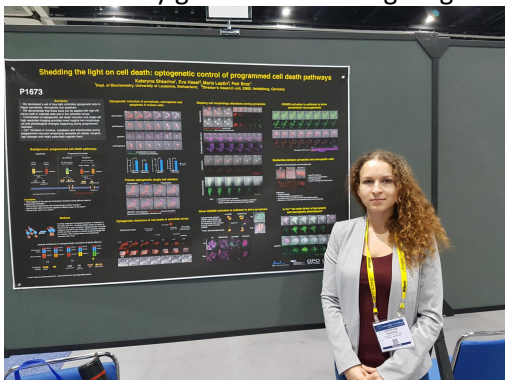
ASCB/EMBO meeting, San Diego, California, 8-12 December 2018

I would like to thank the LS² for providing me with a travel grant to attend the annual joint ASCB/EMBO meeting, which was held this year in San Diego, California on December 8-12th, 2018. This travel grant was a part of a prize for the best cell biology poster on this year's LS² annual meeting in Lausanne, Switzerland, where my research project was distinguished by Swiss cell biology community, granting me an opportunity to further present my research to the international scientific community in US.

ASCB/EMBO meeting is the joint annual meeting of American Society of Cell Biology and European Molecular Biology Organization, which brings together scientists from all over the world. This year it was held in San Diego Convention Center over the course of five days, and was attended by more than 3000 people. The event consisted of multiple sessions, each focused on different topics in molecular and cell biology, ranging from organelle structure and function to intracellular interactions, morphogenesis and developmental biology, as well as several symposia and keynote lectures, which were the real highlights of the conference. I was especially impressed by the talks by Hans Clevers and Magdalena Zernicka-Goetz, both addressing different aspects of reconstituting organoids and embryonic tissues in vitro. Although I was not able to attend all the talks due to many parallel sessions running at the same time, I gained many new insights into different fields, in particular synthetic biology, synthetic morphogenesis and organoids, which I found highly fascinating and promising.

Besides this, the meeting also included multiple poster sessions, industry presentations and workshops, creating a nice environment for intense research discussions, networking and establishing collaborations. My abstract, titled "Optogenetic control of programmed cell death pathways", was selected both for a poster and for a 10-minutes talk presentation during one of the Microsymposia, and I used these opportunities to talk about my research with the wide variety of people from different disciplines. Although it was my first talk on such a big and international conference, I found it extremely beneficial. I received a good and diverse feedback on my work from the people belonging both to the optogenetic and cell death communities, including many useful suggestions and new ideas, which I would not think about myself. Several researchers also expressed a strong interest in the tools I am developing, which I hope might lead to the new collaborations. In the free time, I also attended other posters and industry presentations. I also took an advantage of the multiple career sessions, organized by ASCB, which provided me with useful tips and advices for my further career development. As I am planning to do a postdoc after finishing my Ph.D., I especially appreciated the opportunity to establish new contacts with other early-stage researchers and group leaders and get to know more about their research plans and general tendencies in the field.

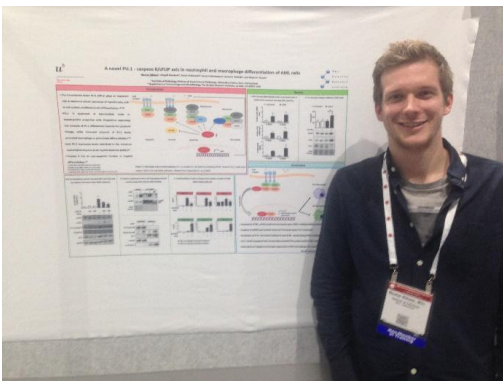
In summary, my overall experience during ASCB was even better than my expectations, as I received a lot of useful feedback on my current research project, significantly expanded my scientific network and discovered several new areas of research, which might be potentially interesting for my postdoc in future. I am extremely grateful to LS² for giving me this mazing opportunity to attend this meeting.



Nicolas Niklaus (University of Bern)

[American Society of Hematology \(01.12.18 - 4.12.18\) in San Diego, CA, USA](#)

First, I would like to thank the LS2 society and especially the autophagy department of the LS2 for giving me the funding, and thus the opportunity to attend such a great international meeting as the American Society of Hematology (ASH) 2018. The impressions I experienced during my first big international meeting will last throughout my scientific career. The meeting of the American society of hematology is the biggest hematology meeting in the world and is annually held in December. It brings more than 25000 clinicians, scientist, and other attendees together to discuss critical issues and latest findings in hematology. During four days, the program is tightly scheduled with several cutting-edge educational programs, scientific sessions as well as oral and poster presentations that are chosen by peerreviewers from submitted abstracts. The beginning of our journey already started roughly because we missed the connecting flight to Los Angeles due to delay of the first flight. Luckily, the airline rebooked us to a flight later during the day, which resulted in a late arrival at the hotel in San Diego. The following day, we registered for the meeting and although we were quite tired because of the late arrival the day before we went to a leukemia workshop before the actual meeting started. After several hours of presentations, we started to feel the jetlag but we fought bravely and made it through the workshop. On Saturday, we woke up early (which was quite easy thanks to the jetlag) to attend the first talks of the ASH meeting, which we picked out carefully from a wide range of sessions that were given at the same time. After few big cups of Starbucks coffee and a long day full of presentation, the first of three poster sessions started in a room as big as hangar. Among thousands of other PhD students and Postdocs, I presented my poster to many international researchers for more than 2 hours. After interesting conversations about my project, we were quite hungry, thus we went to a fish restaurant and enjoyed some fish tacos. On Sunday, we needed to get up early again because we subscribed for a 5K ASH foundation charity run at 7.30 am. After the warm up, we were even able to get hold on the president of the ASH and took a picture with here right before the run started. After a strong group internal competition during the run and a reviving shower, we felt ready for some sessions about transcription regulation during hematopoietic differentiation. In the evening, there was another poster session, when some members of our team presented their poster, thus I had time to stroll among the many posters to get some more impressions and ideas for my project. The following day, we were rather tired from the tight meeting schedule we had, thus we went for a longer lunch break on Coronado Island where we had a nice view on downtown San Diego with the convention center and the hotels, where the sessions were held. In the afternoon, we went to a plenary session about the concept of blood stem cells while fighting still against the jetlag with some Starbucks coffee. On Tuesday, the last day of the meeting we attended the rather interesting presidential symposium about gene therapy and the social and ethical aspects in the genomic age. Lastly, we attended the session "Best Of ASH", where they recapitulated some of the best oral abstracts given during the meeting. After all, I had a great time with my group at the ASH 2018 in San Diego and we were able to network and get a latest update on the current research in the field of hematology. This experience was only possible because I received the LS2 travel grant, thus I'm very grateful to the LS2 committee for giving me the opportunity visiting the ASH 2018 in San Diego. Thanks a lot!



Olga Komarynets (University of Geneva)

[Cilia 2018, Copenhagen, Denmark, 2-5 October 2018](#)

I would like to present the following report of EMBO workshop “Cilia 2018, which took place in Copenhagen, Denmark, from 2 to 5 October 2018. Lotte B. Pedersen organized the event; it was hosted by the MCI Copenhagen and Scandic Copenhagen Hotel (Vester Søgade 6, 1601 Copenhagen).

With the overall theme “Cilia” the aim of the conference was to present and discuss novel achievements in the field of the ciliary biology and cilia associated diseases at the international level.

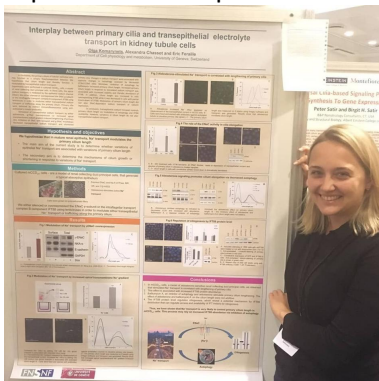
The “Cilia 2018” is an event which is organized every two years in one of the European cities which is selected during the public voting at the previous “Cilia” meeting. It has been taking place since 2012 in Paris, London and Amsterdam.

Over the course of the four-day conference, participants discussed molecular and clinical aspects of ciliopathies; centrosomes, basal bodies and ciliogenesis; signaling and development; trafficking and intraflagellar transport; structural biology of cilia and basal bodies; motile cilia and flagella.

An interactive forum for interdisciplinary interaction between scientists, clinicians and ciliopathy patient was of great interest of everyone and provided a basis for establishment of beneficial networking. Representative of the ciliopathy alliance (rare disease patient community) even kindly offered help with contacting ciliopathy patients on samples enquiry. People would come to the “Cilia 2018” to share stories about their experiences of having a relative or a child with ciliopathy or about passing the diagnostic tests which would be based on TEM imaging of the centrioles to find out what exactly in wrong and how to treat it. Up to 30% of the ciliopathy patients with minor symptoms (which sometimes bring quite some of discomfort to their life) at the moment can be diagnosed in the scientific laboratory only and due to this, people stay untreated for a very long time. The impact of fundamental and clinical research stands to have a great impact on global healthcare, which was a topic explored at this interactive forum.

The conference made clear that the cilia research is a young quickly growing scientific field which has enormous potential to implement the fundamental research for ciliopathy disease diagnostics and treatment.

I am grateful to Swiss Academy of Sciences and the SCNAT who sponsored the LS² travel grant funding, for supporting my traveling to this outstanding event. I hope you enjoy reading this report, which aims to capture the main points and outputs of the conference.



Rachel Winiger (University of Zurich)

[EMBO Workshop: Molecular advances and parasite strategies in host infection, 30 September - 3 October 2018, Île des Embiez, France](#)

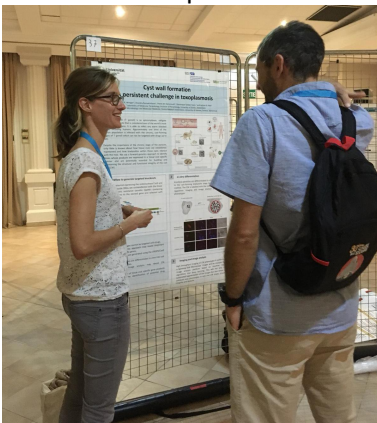
The LS² travel grant provided me with the great opportunity to participate in my first international conference. This EMBO workshop takes place every second year and is a key international meeting covering many different topics and new developments in the field of parasitology. This year around 150 researchers participated in the conference Molecular advances and parasite strategies in host infection taking place from 30 September – 03 October 2018 in Les Embiez Island, France. The conference was a perfect event for me as it brought together an internationally recognized and world leading group of researchers in parasitology. The conference provided a unique environment for the crosstalk between scientists from wide ranging subject areas, leading to new ideas and approaches in dealing with pathogenic organisms.

The conference was structured according to different fields, covering the following seven aspects: Molecular biology and genetics, Cell Biology, Biochemistry and Metabolomics, Host parasite interaction (I) and immunity, Host Parasite interaction (II) and transmission, Parasite signaling and Epigenetics, Diagnostics, disease control, drugs and resistance.

The scientific talks provided me with a broad overview on different parasites, methods and research focuses. Even though laying outside my expertise, the lecture from Nicolas Fasel about "The impact of viral backseat drivers on leishmaniasis" well as the talk from Till Voss with the title "Epigenetic regulation of sexual commitment in Plasmodium falciparum were" excellent and opened my view on those two parasites. Especially inspiring for me as a pharmacist and valuable for my future was the talk about "Drug Discovery for Neglected Diseases" given by Ian Gilbert. He introduced us to his approach to use molecular modeling, mode of action studies and target identification to design potential drugs against neglected diseases such as human African trypanosomiasis, leishmaniasis and malaria. Very useful for my own work were two talks from specialists in the Toxoplasma gondii field. The first talk from keynote speaker David Sibley provided me with an idea for a cloning strategy to achieve endogenous gene tagging by CRISPR/Cas9 for subsequent live cell imaging. Furthermore, the talk of Markus Meissner was of high interest to me as he uses chromobodies to track actin in live cell imaging. As in my side project I generated nanobodies against excretory secretory proteins of Toxoplasma gondii, this approach of fluorophore fusion to the nanobodies is the next step in my own research. In a personal discussion I got to know that the binding capacity and specificity of the nanobodies is not impaired due to the fluorophore fusion, giving me a perfect possibility to apply this system in my own research.

The poster presentations were held in two sessions, where I got the chance to present my main research project in session B. I presented a poster about Cyst wall formation- a persistent challenge in toxoplasmosis. As only few researchers are working on the chronic, cyst-forming stages of Toxoplasma gondii, the audience was mainly interested in the approaches we are using to attack questions about the cyst wall formation. The poster sessions were great as they allowed me to connect and network with group leaders, PostDocs and PhD students and it was awesome to see how many researchers are pleased to share their knowledge, results and enthusiasm for parasitology. Overall I can say, that the conference was very helpful to get inspired, it showed possibilities for collaborations and material transfers.

I would like to thank the LS² society once more for the generous support that allowed me to attend this EMBO workshop.



Anuradha Rajendran (University of Zurich)

[Europhysiology 2018, London, UK, 13-16 September 2018](#)

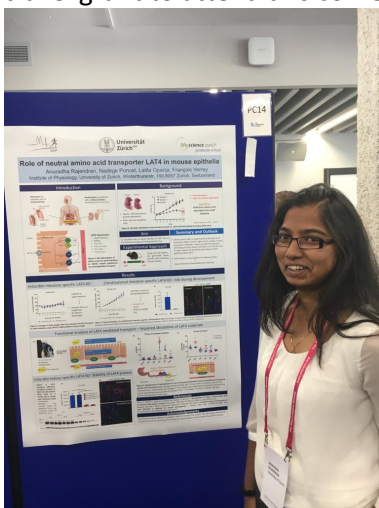
Europhysiology 2018 is the first huge conference jointly organized by three biggest physiological societies in Europe - The Physiological Society, the Scandinavian Physiological Society, the Deutsche Physiologische Gesellschaft and the Federation of European Physiological Societies. The main conference was held from Sep 14th until Sep 16th (3 days) in QEII Centre, London. The conference included many keynote and plenary lectures, talks, oral and poster communications from scientists all over the world and focused on a wide range of topics in Physiology. Among the plenary lectures, the most fascinating one for me, although not being my primary research focus was from Prof. Maiken Nedergaard from University of Copenhagen, Denmark describing the glymphatic system which is a brain equivalent of the lymphatic system, detoxifying brain from byproducts accumulating as a result of neuronal activity. She showed that the glymphatic system massively expands during sleep, giving a logical reason behind sleep's restorative effect.

My primary research focus is on nutrient (re-)absorption in vivo and there were plenty of talks that gave me a broader insight on the ongoing research in the field, amongst which hormone and nutrient sensing in brain and Fructose in physiology: friend or foe? were the most interesting to me. These talks focused on the current advancements in the field, discussing how amino acids and other nutrients were sensed in the brain and also discussed the existing controversies about the role of fructose in physiology, respectively. In addition, the conference also hosted a series of lunch seminars amongst which 'Publishing for beginners' was very helpful to early career researchers like me and gave a bit more detailed view of the dos and don'ts of publishing.

The oral and poster communications were categorized into 7 groups: Cardiac and Respiratory Physiology, Education and Teaching, Epithelia and membrane transport, Human & Exercise Physiology, Metabolism and Endocrinology, Neuroscience and Vascular & Smooth Muscle Physiology. I had the opportunity to present my work in the Epithelia and membrane transport group as a poster communication on 14th Sep. My work is focused on studying the role of a neutral amino acid transporter- LAT4 (SLC43A2) in the small intestine and kidney epithelium in vivo in mice. I took advantage of the given opportunity to share my research and gain more knowledge from experts in the field both by direct communication during poster session and from the oral presentations, which helped me improve my research ideas.

In addition to the main conference, the committee had also organized an Early Career Physiologists' Symposium on 13th Sep for MD and PhD students and young Postdocs. The Symposium included oral communications, flash talks and poster presentations. I got the opportunity to present my PhD project as a poster presentation within 3 minutes. Overall, the symposium gave me the opportunity to discuss my research project with fellow students and young postdocs in the field. Following the symposium, the committee had organized a walking tour to help explore the city of London as the conference itself was held close to prime historical sites. As part of the social event, they hosted an Early career dinner at Tamesis Dock which was both fun and helped improve the interactions among young researchers in the field.

Overall, Europhysiology conference and the associated Early Career Symposium was highly organized, motivating and provided a great platform for networking. I genuinely thank LS² for supporting me with the travel grant to attend this conference.



Benjamin Weiss (University of Geneva)

[Translation Control, Cold Spring Harbor Laboratory, New York, US, 4-8 September 2018](#)

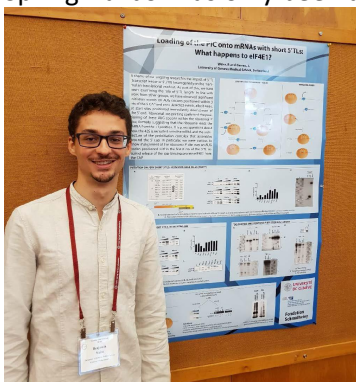
Between the 4th and the 8th of September, I had the chance to participate at the 2018 Translation Control meeting held in Cold Spring Harbor Laboratory in the state of New York. "Translation Control" is a renowned international conference that takes place at CSH every two years.

The meeting focuses on the most energy consuming process in the cell, namely, protein biosynthesis. It is one of the few international meetings at which hundreds of international researchers, and famous personalities in the field of translational control, come to discuss their work. In eight oral plus three poster sessions, the meeting covers every topic spanning initiation to termination and their regulation in both bacteria and in mammals. It focuses mainly on the molecular and fundamental themes of translational control but a few sessions were more patho-physiological orientated covering different aspects of translational deregulation and disease.

As a 4th year Ph.D. student working on translation initiation in mammals, this meeting offered me a lot. First of all, as translation is a broad topic, I gained a lot of new insights from the excellent and diverse presentations (both oral and poster). Moreover, I met many new people increasing my worldwide network. This can only benefit the next step in my career as a post-doc in academia. I

also discussed with many groups working on projects similar to mine and it was an opportunity to see how science is done in other laboratories around the world. I presented a poster at the last poster session. For almost two hours, I was asked a lot of questions and had to defend my work. I was quite surprised by the popularity of my poster and the time went really fast. A few high-profile personalities in the field of translational control stopped by and it was a chance to present my work and to get advice and recommendations from them.

I would like to thank LS² for the support given to attend this very stimulating meeting. Translation Control 2018 was a great occasion to go abroad and see how science looks like across the Atlantic. Going to Cold Spring Harbor has only been advantageous.



Julia Armbruster (University of Zurich)

[XXth conference on Oxygen Binding and Sensing Proteins \(O2BIP\), Barcelona, Spain, 3-6 September 2018](#)

The 20th edition of the oxygen binding and sensing protein (O2BIP) conference took place in Barcelona. The conference was held in the ancient and spectacularly beautiful building, namely the institute d'Estudis Catalans in the middle of the city. The biannual meeting brings together multidisciplinary efforts made on disclosing the relationships between structure, dynamics and function of globins and oxygen-related proteins.

The opening lecture on the first evening was held by Prof. Olson from the USA. Prof. Olson told us all about his 50 years of very diverse hemoglobin research. During the next 3 days, a very wide range of globin topics was covered in different sessions. In the first session about globins in health and disease, Prof. Jay Zweier from the USA gave a very interesting overview of the role of cytoglobin in regulating blood pressure and vascular tone via degradation of nitric oxide by cytoglobin. The following, more computational section was all about structure, function and dynamics of globins. In the first session on Wednesday morning, Professors and PhD students gave an interesting insight in non-vertebrate, bacterial and plant oxygen binding proteins. Even though this topic is not much related to my PhD work, it was fascinating to hear about globins in a different context. In following sections, the evolution of oxygen binding proteins was discussed and last but not least, all kinds of interactions of globins with reactive oxygen species, nitrogen and sulfur species were

reported. The poster sessions took place during the lunch and coffee breaks. Because of the wonderful weather in Barcelona, we had the possibility to present the posters in the sun in the inner courtyard of the institute. During the poster sessions, I had the opportunity to present and discuss my project called 'The role of myoglobin in the

tumorigenesis of breast cancers' with Professors and other PhD students of different fields in globin research. I was excited to get so many inputs and to develop new ideas for my upcoming experiments.

The conference dinner took place in a restaurant in a vineyard 30 minutes outside of Barcelona. During the apero and also the typical Spanish dinner with a spectacular view over Barcelona and the sea, we had the chance to do extensive networking with other participants of the conference. I already had the chance to visit the prior O2BIP meeting in Hamburg in the very beginning of my PhD, which was a wonderful opportunity to hear about the diverse research areas regarding globins and to meet people working in similar fields.

Therefore, it was even more interesting this time, to re-meet people whom I have already met in Hamburg and to hear about their progress in their own research. I would like to thank the LS² for giving me the opportunity to visit this year's O2BIP in Barcelona, where I made many contacts with people in the globin field and developed many new ideas for my own project.



María Suárez Alonso (University of Fribourg)

[XXth conference on oxygen binding and sensing proteins \(O2BIP\), Barcelona, 3-6 September 2018](#)

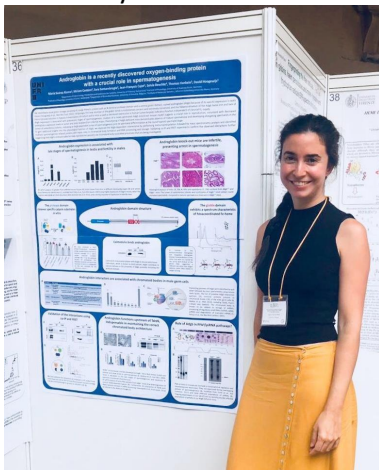
As a PhD student, I am working on the functional analysis of androglobin, a new member of the globin family of proteins that has been recently identified in our research group. This work is being carried out in the Medicine section at the University of Fribourg, where we established two years ago our new lab under the supervision of Prof. David Hoogewijs. Here we can share our experience on different molecular biology techniques with our colleagues but also benefit from the feedback and close collaboration with other groups working on various facets of the human physiology, from endocrinology to metabolism or cardiology.

Since our matter of interest is very much related to the molecular aspects of oxygen binding proteins, the XXth international conference on oxygen binding and sensing proteins (O2BIP) that took place in Barcelona from the 3rd to the 6th of September meant a great opportunity for me to present my work in an environment dedicated to our specific area of research. There I could discuss the potential of my work with experts in the topic and establish collaborations that will contribute greatly to completing the aim of my PhD and publishing it.

The conference addressed different aspects of the world of the oxygen binding proteins, including evolutionary, structural and molecular. This gave me the chance to explore the field from a broader point of view, which will greatly help me to put my work into context in a written PhD thesis in the following months, as well as to decide on possible next steps to take after my PhD.

It also gave me the opportunity to present my work on a poster that was positively received by the community and was also awarded with a prize sponsored by the scientific journal *Molecules* MDPI.

All things considered, this conference has been a very good experience for me, my future career and our research group and definitely worth visiting and I appreciate very much the financial support offered by the LS² society.



Larisa Maier (University of Fribourg)

Neurofly 2018, Krakow, Poland, 3-7 September 2018

As PhD student in the final part of my doctoral research I decided to participate to Neurofly 2018, the 17th European Drosophila Neurobiology Conference, as this could be an important part of my decision on next steps of my career. The meeting is taking place every two years in a European city, gathering numerous researchers from all over the world reunited by their interest in neurobiology on the fruit fly experimental model.

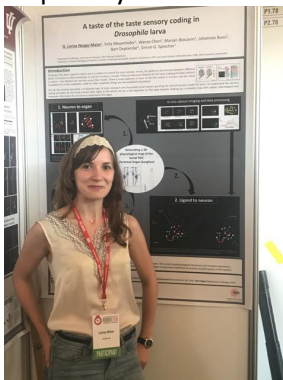
This year the conference was held in Krakow, Poland, from the 3rd until the 7th of September, in the Auditorium Maximum of the Jagiellonian University. I arrived in the city one day before the start of the meeting and booked an apartment on Lobzowska street, a few minutes walking distance from the auditorium.

The conference was organized by topic in different sections. The celebrated topic of the meeting was circadian rhythm, considering that the 2017 Nobel Prize in Physiology or Medicine was shared by three researchers that dedicated their life's work on understanding circadian rhythm mechanisms in flies, contributing significantly to the understanding of these processes in mammals and humans. Therefore, the first plenary speaker of the conference was Michael Rosbash, one of the above mentioned Nobel Prize winners. His talk was focused on unpublished work in his lab in Brandeis University (USA) on the circadian rhythm in Drosophilacentral and peripheral visual system. The first conference day ended with a reception in Collegium Maius of Krakow, a university building that carries tremendous historical significance for Poland.

Other topics besides the circadian rhythm were related to RNA regulation, the importance of glia cells for neuronal functions, neurodegenerative disorders and sensory systems. Posters were allowed to be displayed for about two days but the dedicated poster sessions were restricted to 1,5 hours, also organized by topics. My poster on the taste system of the larval fruit fly was scheduled in the last poster session, corresponding to the timing of the sensory systems talks towards the end of the conference. During the poster sessions authors had the chance to share their project and results and to receive feedback, opportunity which I fully took advantage of, exchanging ideas with people interested in similar neurobiological problems.

At the half of the meeting, on Wednesday afternoon, we had a guided walking tour in the city centre and afterwards we participated to a dinner organized in a restaurant in the Jewish district, giving us another chance to explore the city. Moreover, we could take the opportunity to visit the restaurant's brewery and to taste the four local artisanal beers (photo attached).

To sum up, the conference gave me the opportunity to share ideas and ask questions about my topic to people having the most expertise in the field. Also, I have now a better overview of the activity and the existing laboratories in Drosophila neurobiology across 4 continents, with potential influence on the next step in my research career.



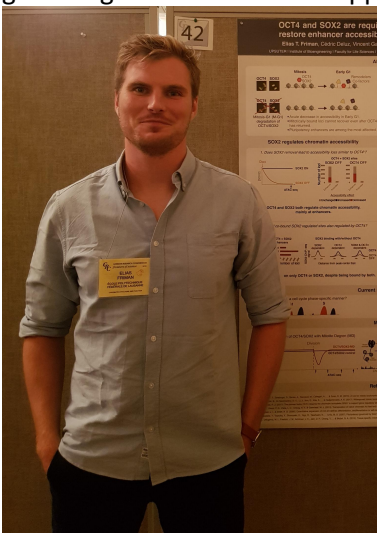
Elias Friman (EPF Lausanne)

[Gordon Research Seminar & Conference: "Chromatin Structure and Function"](#), Newry (US), 22-27 July 2018

Gordon Research Conferences (GRC) date back to 1931, making it one of the longest running conference organizations in the history of science. Each year almost 30'000 participants meet to discuss the latest science in the field, much of it unpublished thanks to the GRC policy of not allowing public disclosure of presented material. Conferences have limited participation (<200 people) and are often in remote places to foster interaction between scientists at all levels. The good atmosphere and excellent scientific selection of GRCs has many participants coming back to the same meeting for decades. I had the opportunity to attend the "Chromatin Structure and Function" conference, one of the oldest meetings that has been going every two years since 1972. This was the first year that included a "Gordon Research Seminar" (GRS), a two-day pre-conference seminar aimed at PhD students and post-docs. The seminar featured a keynote lecture, selected talks by younger scientists, a poster session, and a discussion session focusing on scientific careers. This was a great opportunity to discuss science with your peers in a more relaxed atmosphere and with fewer participants. A new committee of students and post-docs was elected to continue organizing the GRS at the next conference in two years, and many people showed great interest to return.

The main GRC conference has a format featuring talks in the morning and evening with a long break in the afternoon where many activities are available, and a poster session before dinner. Due to the length of the conference (5+ days), this is a nice schedule that allows for both plenty of interaction and makes each session feel like an event. The short talk format (max 20 min.) is also great for keeping your attention high. If you manage to catch them, professors are generally very approachable and interested to discuss their science with their younger colleagues, and most of them also attend the poster sessions. This is unlike many other conferences I have attended. The topics of the talks and posters covered both fundamental and applied science but with a strong emphasis on the basic aspects of chromatin biology. While most talks included genomics and biochemistry, there was a strong representation of microscopy techniques, with both classical methods such as DNA-FISH and modern super-resolution single-molecule imaging. The spectrum of talks highlighted the importance of using different methods to study the same phenomena in order to get a full picture of what's happening with chromatin in the cell. A prevalent theme throughout the conference was the discussion of phase separation phenomena. Recent studies have elucidated the role of phase separation in both heterochromatin formation and gene activation, and it was evident that this has had a large influence on the scientific community. Some discussions took place over the relevance of these observations, and based on what was presented in this conference I think it will become evident over the next few years exactly what is going on.

I had the opportunity to present a poster at the conference, which was both fun and educating. After plenty of discussion and good questions I came back to the lab with many ideas on my project. My experience at this Gordon conference is one that cannot be compared to other shorter conferences I have attended where the emphasis is on many and long talks with limited time for interaction. While the conference may be less useful for someone in the beginning of their research career, more advanced PhD's and post-docs can benefit enormously from such an event. I cannot recommend it highly enough. I want to give a big thanks to LS² for supporting me in attending this conference!



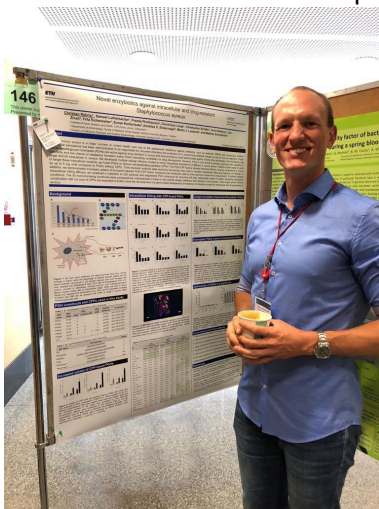
Christian Röhrig (ETH Zurich)

EMBO Viruses of Microbes 2018, Wrocław, Poland, 09-13 July 2018

From July 9th – 13th I had the pleasure to be participating at the 5th Viruses of Microbes EMBO Workshop in Wrocław Poland. The theme of this conference was the ‘Biodiversity and future applications’ of bacteriophages, which was reflected in a program full of excellent speakers and relevant topics. As the natural enemies of bacteria, bacteriophages, have gained more interest over the past decades. The increasing spread of antibiotics resistance and the lack of novel antimicrobials pose major challenges to modern health care and are good reasons to study bacteriophage. However, not only phages, but also phage derived tools and products were presented at this conference, co-organized by The European Molecular Biology Organization, The International Society of Viruses of Microbes, and The University of Wrocław.

The modern conference venue at the Faculty of Law, Administration and Economics of the University of Wrocław provided sufficient space for over 500 participants to exchange, discuss and present their scientific research. The constant stream of talks in the large lecture hall was accompanied by poster sessions every afternoon and a highly informative preconference workshop which I happily attended. After focusing on phage sequencing methods the first speaker, Rob Lavigne, discussed further omics techniques and how they can be used in phage research. Rami Aziz, the next speaker, transitioned smoothly and gave insights into the bioinformatic processing of phage sequencing data. He provided an excellent introduction into currently available tools and those parts, which still cannot be automated and have to be done by hand, such as the verification of gene annotations. Both speakers complemented each other nicely as they also talked about the potential pitfalls during application of the presented techniques. The conference continued with talks about the basic biological functions in the phage life cycle and structural studies of the proteins involved therein. More applied topics followed, such as phage derived enzymes and their biotechnological potential. Phage therapy was discussed scientifically, but also on the administrative aspects were debated. The panel discussion on the future of phage technology was a highlight of this conference, which had experts discuss how and why phages could be used in clinics. Additional to phage therapy the application to the market sessions were the most interesting to me, as industrial partners also gave insights into their research. Thanks to an accommodation grant from the organizers of the conference, I could stay in a twin bed room with another conference participant in a student house. This and the social program of the conference provided great opportunities to network with researchers from the international phage community. My poster, No. 146, on the development of novel enzybiotics against intracellular and drug-resistant *S. aureus* was well perceived and I received great feedback for my future work.

I want to thank LS² for their support in enabling me to have such a great opportunity and recommend the Viruses of Microbes Workshops to any other scientists interested in bacteriophage.



Annika Hausmann (ETH Zurich)

[Mucosal Immunology Course and Symposium, 17-20 July 2018, Oxford, UK](#)

I am a PhD student in the laboratory of Wolf-Dietrich Hardt at ETH Zürich, where I study the early host response to Salmonella Typhimurium infection. Recently, I was awarded with the LS² travel grant, giving me the chance to attend the mucosal immunology course and symposium (MICS) 2018 held in Oxford from July 17-20 2018. The meeting was a combination of a course in mucosal immunology taking place on July 17th, and a symposium lasting from July 18th-20th.

I arrived on Monday evening to be able to attend the course starting on Tuesday morning. The course offered a great opportunity to catch up with the general principles of mucosal immunology for topics outside of my main research focus and provided a good basic overview for the following days. Highlights of the course were talks by Hamida Hammad about allergic asthma, by Martin Williams about single cell sequencing and how it can help to unravel macrophage identity, as well as by Kevin Maloy about the role of intestinal epithelial cells in mucosal immune responses.

The actual symposium started with a great Keynote Lecture by Yasmine Belkaid, sharing a fascinating story about adipose-tissue associated memory cells. Further inspiring talks were given among others by Henrique Veiga-Fernandez about the interplay of enteric neurons and ILCs and by Fiona Powrie about the role of IL23 in a specific inflammatory bowel disease model, as well as e.g. by Emma Dutton, a PhD student from the University of Birmingham, as a Featured Abstract Presentation.

The posters were presented in two sessions. I had the opportunity to present my poster during the first session. The session was quite crowded and I had a number of interested visitors at my poster, among others Mathias Hornef, a PhD student of the lab of Simon Milling and a Postdoc from the lab of Robert Zeiser. I got some valuable feedback on the project, as well as some technical advices with the option for a future collaboration. Furthermore, I won the poster prize of the first session!

During the lunch break of the first day and the poster session of the second day, I had the chance to visit some very interesting posters. To name a few, very interesting work on inflammasome-mediated host defense was presented by members of the Kevin Maloy lab. As I work in the same field, it was very informative to understand and discuss their work. Furthermore, Susan Roberston from the lab of Dana Philpott in Toronto presented data on the importance of littermate controls in comparison to co-housed mice. This work is especially relevant for my daily lab life. Another exciting story was presented by Aurelien Trompette from the lab of Ben Marsland in Lausanne, highlighting the beneficial effect of a high-fiber diet for the host defense against influenza.

Besides the excellent scientific program, the meeting offered ample opportunities for networking. The Welcome Reception and the Trainee and PI Reception provided the opportunity of mingling with peers in a relaxed atmosphere. Besides that, the Network Lunches and the poster sessions made it possible to catch up with friends made at previous conferences, as well as building a personal relationship to collaborators that I haven't met in person before.

Overall, the visit of the MICS2018 was a great opportunity that allowed me to broaden my overview over the field of mucosal immunology and to catch up with the latest news. It was great to get feedback on the project I presented. I feel very honored to be awarded with the poster prize. Finally, it was a great experience to meet old friends and make new ones, and to put faces to our collaborators from abroad.



Romain Cardis (University of Lausanne)

FENS 2018, 11-17 July 2018, Berlin, Germany

Dear members of the LS² section physiology,

Thanks to the financial help of the LS², I recently participated to the 2018 edition of the FENS forum in Berlin. As expected, it was 5 days of intense Science during which I had the chance to follow many seminars from well-known specialists in neuroscience. One page is not enough to talk about the whole event, so I will give quick summaries of the seminar and the plenary lecture that pleased me the most and talk about my poster presentation and interactions with other presenters.

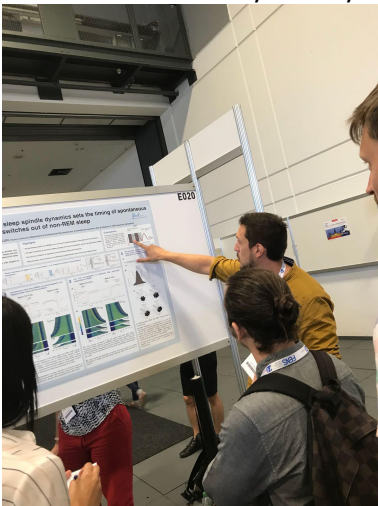
On the 8th of July, there was a seminar section on thalamo-cortical circuits in sleep and cognition. We had the chance to listen to Prof. Antoine Adamantidis for a presentation on subcortical inputs to thalamo-cortical circuits in arousal. The subject being closely related to my own work, I was interested to learn that they discovered a novel type of thalamic control over slow wave sleep (SWS) and to non-REM-sleep (NREMS) to wake transition. Firing of neurons in the centromedial thalamus seem to precede arousals from NREMS. For my own project, I would be curious to record these neurons over long periods and see whether they are also time locked to the 0.02 Hz oscillation in sigma power, recently described in our lab.

For one of the plenary lectures, I listened to Prof. Irene Tracey on her last contribution in the fields of pain, analgesia and anesthesia. My main PhD project is about pain perception detected with electro-encephalogram (EEG) and local field potential (LFP). One of the highlight of her presentation was the use of EEG on patients and its MR-imaging correlate to reliably assess the depth of anesthesia during surgery. To see that a study using comparable methods as mine has a direct application in patients, greatly motivated me in my own endeavor.

Finally on the 9th of July, I presented my poster from 9:30am to 1pm. I was surprised by the number of people that came and I had great discussions with several people. Niels Niethard from the Jan Born group in Tübingen gave me a nice input on future analysis on intermediate sleep, and Özge Yüzgeç from the Daniel Huber group gave me her ideas on the possible mechanisms underlying the 0.02 Hz oscillation in sigma power, since she works on its correlation with pupil diameter. The next day, we could continue our discussions when they presented they own posters.

Overall, I was impressed and very pleased by this 2018 edition of the FENS. It was my first international congress and I returned to the lab with a lot of new ideas of experiments and analysis.

I would like to thank you for your consideration and your financial help.



Fabio Amadei (University of Zurich)

23rd Annual RNA Society Meeting, Berkeley, US, 29 May - 2 June 2018

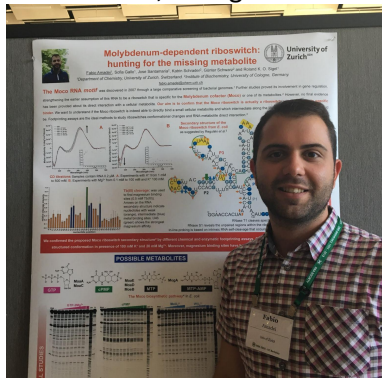
The meetings of the RNA society are the most important meetings in the field of RNA biochemistry, chemistry, and molecular biology, bringing together all experts in the field, making this yearly event very special. It is a unique chance for every PhD student to get in touch with the experts of all branches of RNA research. This is particularly important for me, as I work on a project that is at the interface between RNA chemistry and biochemistry, as well as reaching into structural and molecular biology. This year the meeting was hosted in Berkeley, CA, USA with thousands of participant from all over the world. The five days meeting has been structured with a dynamic schedule. In fact, it consisted of:

- Plenary Sessions with a very broad view on all the RNA research.
- Workshops focused on new methods for in RNA production, purification and analysis.
- Poster sessions with almost 800 posters from PhDs, postdocs and group leaders.
- Company sponsored seminars where they promoted new products and technologies.

Our research focuses on riboswitches that are a small family of non-coding RNA involved in gene regulation. These systems are studied by few research group in the world and the main ones were all present at the conference with talks and posters. I had the opportunity to present my work and our latest results in a poster session. During that, I really had exciting and useful discussions with conference participants and with some of the top scientists in the RNA field. A lot of participants were interested in our research and this was especially inspiring and a proof that we are doing a good job. Moreover, to attend talks and to discuss in front of posters from other research groups have been fruitful for the rest of my PhD, as I received suggestions for my research and I expanded my network and connections. I particularly appreciated the talks in the RNA structure, regulatory RNAs and RNA-protein interaction sessions.

The RNA society has a group of young scientist organizing events especially for PhD and Postdoc. These events have the aim of helping young scientists in the development of their career in both academia and companies. Especially, this year the focus was on Careers Beyond Academia. The junior scientist committee organized an industry session as well as a mentoring lunch with young representative from startups and big companies, where the participants had the opportunity to directly ask questions and learn from the mentors personal experiences. I appreciated these events, it was a good way to make connections with companies and to get in touch with their expectations and needs.

For our group was important to be present at the RNA society meeting 2018 and to present and promote our research, I am grateful to LS² for supporting this great experience with the travel grant.



Maharani Retna Duhita, University of Fribourg

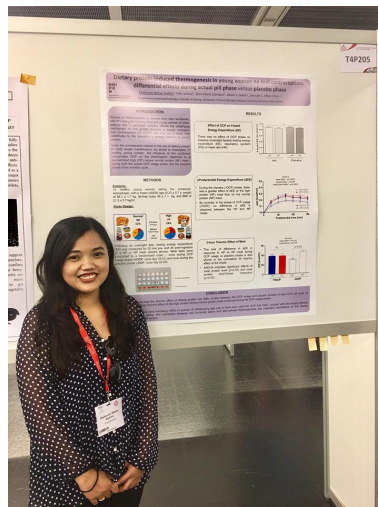
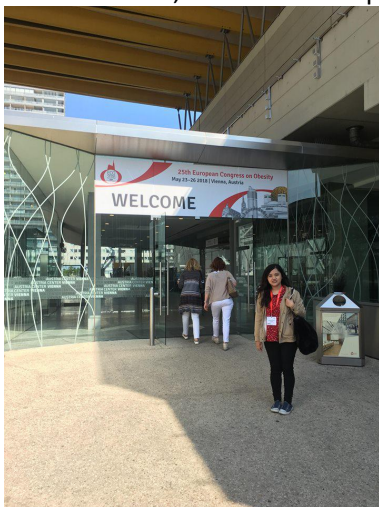
25th European Congress on Obesity, 23-26 May 2018 Vienna, Austria

I attended the 25th European Congress on Obesity 2018. ECO 2018. This conference took place between 23-26 May in Vienna, Austria. It was organized by EASO, a federation of professional membership associations from 32 European countries. It is the platform for the European obesity community and has official links with the World Health Organization (WHO). It was the second time for me to attend this conference. My abstract titled "Dietary protein-induced thermogenesis in young women on oral contraception: differential effects during actual pill phase versus placebo phase" was selected by the international scientific committee for poster presentation in the session "management and intervention". In addition to my poster presentation, I spent time attending many other conference events. In particular, on the first day of the conference (23rd May), I attended the teaching course in the morning about weight stigma, including the consequences of weight stigma together with the patient perspective of weight stigma. From this teaching session, I realized that weight stigma has an impact on healthcare access and also public opinions. There also discrimination in education and employment because of that. Therefore, there is a need to educate not only health professional, but also public to overcome this problem. In the 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 (24th May), I attended the teaching session in the morning about long-term patient empowerment because yet still many of patients 'relapse'. During this two-hour teaching session, they mentioned that more than 20 countries in the world only focused on starting and supporting long-term process for self-driven cumulative behavior change. However, there is a need to consider one or more theories of empowerment, including the different roles of 'nudging' and empowering. Whilst, on the afternoon there was a session about -Where do we want to be in 2030? -. In this session, they talked about how to create a sustainable food system with affordable, accessible, and available health-promoting food. This session also addressed what policy question do we need to ask to reduce the socioeconomic gaps.

On the third day (25th May), I attended a symposium about assessing body composition for a better understanding of risk related to childhood obesity and designing effective interventions. This session was particularly interesting because in the future after I finish my study and going back to my country there was an opportunity for me to collaborate with the International Energy Atomic Agency (IAEA) in applying nuclear techniques to design and evaluate interventions to prevent and control obesity in Indonesia. For the last day (26th May), I attended the oral session about obesity and reproductive health, because it was related to my thesis.

To summarize, most of the talk of this conference was about bariatric surgery, weight stigma, and childhood obesity. Moreover, this conference gave me an excellent opportunity to not only present my work, but also to meet and build networks 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 whom I hope to collaborate and interact with again in the future.



Julie Calonne (University of Fribourg)

25th European Congress on Obesity, 23-26 May 2018 Vienna, Austria

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.

The ECO 2018 meeting enrolled in Vienna (Austria) and it 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).

This excellent meeting brought together colleagues from every area of obesity research, prevention, and management. Participants come from various field areas (clinicians, researchers, industry representatives, experts and key opinion leaders) and from worldwide which can give us an idea of the actual research perform everywhere.

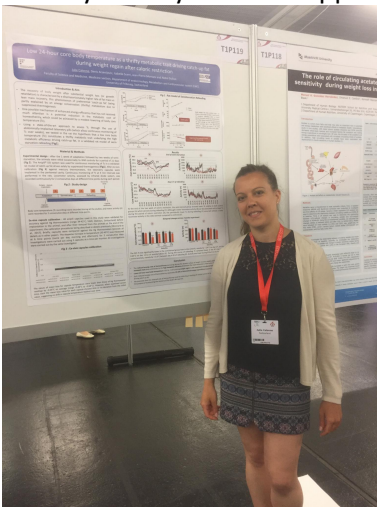
In fact, during my session poster I could discuss with several persons, on our conclusions and also take into account different point of views. It's rewarding to be able to discuss with persons from different research fields. I could share my experience, and it was really interesting. All the talks was pertinent and interesting and was very useful to finalized my thesis discussion and in preparation for my thesis defence.

I learn also many tools on Human research because in the future I planed to focused my 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 body composition assessment/techniques.

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, Viennese people are really nice and the place where the conference took place was beautiful.

Thank you for your kind support.



Sarah Vermij (University of Bern)

9th Ascona International Workshop on Cardiomyocyte Biology 22-26 April 2018, Ascona

A century ago, idealists founded an alternative vegetarian colony on top of a mountain in Ascona, Ticino. They called it Monte Verità, and they welcomed intellectuals, artists and anarchists alike. Now, the not-so-alternative Monte Verità crew hosted scientists from all over the world – even from Ticino.

As professors presented their newest data in the dark seminar room only lit by a power point presentation, we were only too happy to take the discussion outside onto the sun-flooded terrace overlooking Lago Maggiore. There were fascinating data aplenty, from classical to groundbreaking, and from clinical to technical advancements.

On genetics of cardiac disease, Elisabeth McNally (Northwestern, Chicago, USA) showed that the more mutations a patient carries in cardiac genes, the higher the chance on dilated cardiomyopathy (DCM). Interestingly, mutations in sarcomeric genes show that one mutated copy is “bad” and leads to hypertrophic cardiomyopathy, but two mutated copies are “worse” and lead to DCM. Elisabeth Ehler (King’s College, London, UK) nicely complemented this story with her findings on how, in DCM, the intercalated disc is more convoluted, which correlates with higher F-actin and PKC expression.

Matthias Nahrendorf (Harvard, USA) spiked our curiosity like no other speaker when he proposed that macrophages are crucial for AV-conduction. Mostly found in the AV-node, macrophages likely couple to cardiomyocytes through gap junctions, thereby slightly depolarizing them. Indeed, several macrophage-deficient mouse models show impaired AV-conduction.

Within the cardiomyocyte, many speakers were dedicated to the gradually maturing field of long non-coding and microRNAs, as more lnc- and miRNAs are identified in cardiac disease and their functional diversity is gradually unveiled. The lncRNA Sweetheart, for instance, is involved in heart morphogenesis and recovery after injury (Philip Grote, Max Planck Institute, Berlin).

As far as research techniques were concerned, a lot of attention went out to iPSCs, which are, after all, hopeful but far from perfect. Monica Bellin (Leiden, the Netherlands) illustrated the diversity of iPSCs, thereby stressing the importance of the right controls, and Birgit Goversen (Utrecht, the Netherlands) showed that iPSCs express funny current (IK,f), warning us that iPSCs should not be assumed to be electrically mature.

Before iPSCs become the go-to system, plenty of advancements occur thanks to zebrafish (cardiomyocyte plasticity, Nadia Mercader-Huber, Bern; in vivo imaging, Dorien Schepers, Antwerp, Belgium), the good-old mouse (e.g., hypoxia-induced heart regeneration in mice, Hesham Sadek, Dallas, USA) and even macaques (as a congenital heart disease model, Ran Yang, Karolinska, Sweden).

On our last evening, having left “our” mountain behind to enjoy a dinner on the waterfront, we distilled the most notable finding from this meeting: females made up 50% of speakers and provided equal scientific weight as men. The world of science may still be male-dominated, but Monte Verità proved to be an idealistic community yet again.



Emma Ricard Altimiras (SIB Lausanne)

[Swiss Proteomics Meeting, Montreux, Switzerland, April 19-20 2018](#)

The Swiss Proteomics Meeting gathers every year more than 100 researchers, mainly from the swiss proteomics community but including some international speakers. The meeting offers a broad range of talks in fields such as mass spectrometry, proteome dynamics, bioinformatics and interactomics. PhD students, post-docs, group leaders and vendors have the possibility to interact and present their work during this 24 hours format conference.

The conference comprehended several types of presentations: keynote speakers, oral presentations of 15 minutes, flash talks and sponsors talks. Most of them presented mass spectrometry experiments and workflows for different purposes: biomarkers discovery, protein-protein interactions, differential expression analysis, etc. Vendors presented new technologies and advancements. Personally, what I enjoyed the most were the presentations regarding bioinformatic tools and pipelines because this is my field of research. Actually, I got to know other bioinformaticians during the “Apéro” and the dinner of the first day, so it was very useful to get up to date with the new bioinformatic technologies and to discuss new ideas.

Fortunately, I was selected to present my work during one of the flash talk sessions. Thereby, I could describe the tools that I have been developing during these years of PhD for the study of non-ribosomal peptides. I think that presenting my work is particularly interesting in my field, because we do not only develop these tools for our own research, but also with the aim of helping the whole community. That is why it is crucial to present them in this kind of events.

To sum up, I think that assisting to this conference was highly beneficial for my PhD because I had the opportunity to make my work more visible, discuss with other scientists, get new ideas and extend my contacts in the field. All this surrounded by the magnificent views of the Léman lake in Montreux. Thank you LS² for facilitating it with your financial support.



Thibault Robin (University of Geneva)

[Swiss Proteomics Meeting, Montreux, Switzerland, 19-20 April 2018](#)

Thanks to the LS² travel grant, I was able to attend the 2018 edition of the annual Swiss Proteomics Meeting in Montreux, Switzerland from the 19th to the 20th of April. This meeting organized by the Swiss Proteomics Society, forming nowadays the proteomics section of the LS², allows numerous talented researchers in proteomics and mass spectrometry from all over Switzerland to meet every year and share their latest work. Although being focused on Switzerland, prestigious keynote speakers from all around the world are also invited to this meeting to present their projects. This was also the case for this 2018 edition with the participation of Jennifer Van Eyk and Matthias Selbach, with their impactful talks on individualized medicine and proteome dynamics respectively.

This conference was for me a great occasion to present the large scale reanalysis of the HeLa cancer cell line that we performed in our group. My abstract was selected for a flash talk (5 min), during which I presented the potential, but also the many challenges, that one may encounter when reanalyzing a large amount of mass spectrometry-based proteomics data. I hope my talk could convince the public that there is a strong interest in reusing public data, as many new PTM sites, peptides for “missing proteins” and variants can be identified in this manner. I also showed a methodology to assess the impact of single amino acid variants on protein expression and stability, which could lead to promising findings after tuning. During the coffee breaks, I exchanged with the many attendees of the conference, some of whom have suggested interesting ideas to perfect my workflow and opened me up to new ideas.

To conclude, I want to thank the LS² for giving me the opportunity to share my work with a large audience of experts in the proteomics field. The general feedback was very positive, and many productive discussions were held. Moreover, it was really interesting as a bioinformatician to attend quality talks about the experimental part of proteomics, as it allowed me to realize the breakthroughs and new challenges specific to this part of the field.



Amarendra Badugu (University of Zurich)

[Tissue Self-Organisation: Challenging the Systems, EMBL Heidelberg, Germany, March 11-14 2018](#)

Tissue Self-Organisation: Challenging the Systems symposium at EMBL Heidelberg brought together more than 150 researchers working on the theme of self-assembling properties of metazoans. The subtopics covered are symmetry breaking in cells and tissues, collective cell behavior, morphogenesis, tissue mechanics, pattern formation, modelling self-organization, synthetic biology and organoids. Researchers from experimental cell biology and theoretical modelling backgrounds gave talks which were distributed over six half day sessions.

The very best talks combined experimental results with theoretical models during developmental processes. I felt there was very good balance of molecular, biophysical and engineering approaches to biology. Further there were plenty of opportunities for networking and discussing ideas. I enjoyed discussions on pattern generating systems and information content systems. By interacting with other participants posters, I received exposure to the more recent methods and results.

During the poster session on the evening of day 3, I presented my most recent work on one of my PhD projects on Cytoplasmic flows during Interkinetic nuclear migration. I enjoyed stimulating discussions with many international visitors from both biological and tissue mechanics backgrounds from whom I received valuable and critical feedback. At this point in the process of our manuscript preparation, this was an extremely important and crucial step. Further I received several ideas for future extensions of this work and applications in other systems.

In conclusion, I felt the symposium was a great example of exposure to a group of highly qualified and motivated interdisciplinary researchers on tissue self-assembly, mechanics and developmental biology. I am thankful to LS² for supporting my participation with this travel grant.