



13th Horizons in Molecular Biology

International PhD Student Symposium and Career Fair for
Life Sciences

13TH HORIZONS in MOLECULAR BIOLOGY
Max Planck Institute for Biophysical Chemistry, Göttingen, Germany
12-15 September 2016

Federal Ministry of Education and Research
Under the auspices of Prof. Dr. Sabine Hübner
Federal Ministry of Education and Research
www.horizons.uni-goettingen.de

Presented by the students of the BPPS for Molecular Biology at the Georg-August University Göttingen

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Poster Sessions

Around 40 posters will be presented during Horizons 2016. Students can therefore discuss their research individually with speakers and fellow students. A jury, consisting of one speaker, one faculty member and an organizer from our PhD program will evaluate the posters, and prizes will be given for the best three posters (Prize 1-3). To allow the jury to talk to the presenters of the the posters, students should be at their posters during the following subsessions:

Odd poster numbers will be viewed preferentially on Tuesday (Wine and Cheese), even poster numbers on Wednesday (Lunch Buffet).

Posters will be presented in the Ludwig Prandtl Hall.

Wine and Cheese: During the first poster session, a wine and cheese tasting is organized, where a great variety of cheese from different places will be served. With a glass of wine in hand, you can have candid discussions regarding the research of young scientists from all parts of the world.

Poster Prize

The poster prizes will be awarded to three PhD students presenting innovative work in the field of Molecular Biology. All registered PhD students presenting a poster at the International PhD Student Symposium "Horizons in Molecular Biology" 2016 will be eligible for the awards.

The only requirement is to be available during the poster sessions to present the work to members of the jury. The jury (to be announced) will comprise the invited speakers and IM-PRS PhD students and faculty. Our exciting prizes this year are

- A Nikon coolpix A10 camera
- A set of pipettes signed by Goettingen Nobel laureates Stefan Hell and Erwin Neher.
- A signed copy of „Molecular Biology of the Cell“ by one of its coauthors David Morgan.

Awarded Student Talks

One of the main aims of Horizons is sharing the research across the disciplines and among scientists at different stages of their career. Therefore, this year we introduced the Awarded Student Talks sessions.

The concept is that students present their original work focusing on the results and the impact of their work. Based on the submitted proposals for the award, we selected students who will give the oral presentation. Congratulations to all the awardees!

Heng-Chang Chen:

“Visualization of HIV latency by the new technology Barcoded HIV Ensembles”

Adi Goldenzweig:

“Designing stable protein variants to serve as superior therapeutics in one shot”

Adriana González:

“The Alzheimer’s disease risk factor Phospholipase D3 (PLD3) utilizes an ESCRT – and protease – dependent route to lysosomes”

Dimitry Tegunov:

“Exploring Biological Membranes with Membranograms”

Agata Witkowska:

“Reconstitution of synaptic vesicle exocytosis in a GUV-based in vitro fusion assay”

IMPRS for Molecular Biology

For the 13th time, the Horizons Symposium is organized by students of the International Max Planck Research School (IMPRS) for Molecular Biology at the University of Göttingen. The Molecular Biology Program is jointly conducted by many different departments of the University of Göttingen, the Max Planck Institutes for Biophysical Chemistry and Experimental Medicine, the European Neuroscience Institute as well as the German Primate Center. The common aim is to offer an intensive, research-oriented education in order to prepare the students for a professional career in the life sciences. This broad spectrum of topics is mirrored in the fields covered in Horizons. In addition to the small classes and specialized hands-on laboratory courses, the intercultural experience is extraordinary. Excursions, culture nights and workshops with students from all over the world naturally become a “seminar” on intercultural communication. Students can join the program after completing their Bachelor studies. During the first year, students receive a broad education in molecular biology through lectures, lab rotations and methods courses delivered by the participating institutions. From the second year, the students conduct their own research during their MSc or PhD thesis projects and receive further training in specialized methods and skills courses within the Göttingen Graduate School for Neurosciences and Molecular Biosciences (GGNB), which is funded by the German Excellence Initiative.

In September 2000 the first brave students from as far away as Ghana, China, Mexico and Malaysia came to Göttingen to join the new International MSc/PhD Molecular Biology Program. Today, with the fifteenth batch of twenty students joining the IMPRS, the program has become very successful as demonstrated by excellent evaluations, awarded prizes, and an ever increasing number of applicants. By now, more than 100 students have successfully defended their PhD theses within the program and kissed the Gänseliesel. Kissing this statue that stands on a fountain on the market place in the middle of the city and giving her flowers is an old tradition for Göttingen PhD students (read more about this in the text about Göttingen, page 22) For more detailed information about the International MSc/PhD Molecular Biology Program in Göttingen, please take a look at our website:

www.gpmolbio.uni-goettingen.de



History of Horizons

In 2003, the coordinators and students of the IMPRS Molecular Biology in Göttingen decided to host an international conference the way they felt it should be, "from PhD students for PhD students" - and Horizons in Molecular Biology was born! The meeting was designed to promote scientific exchange between young life scientists from different disciplines and to provide a relaxed and direct exchange with internationally renowned researchers. This concept has been followed throughout the history of Horizons and is still at the heart of the 11th time that our (and your! - because what would a conference be without its participants?) Horizons in Molecular Biology symposium takes place.

The inaugural International PhD Student Symposium Horizons in Molecular Biology took place at the Göttingen Center for Molecular Biosciences (GZMB) on December 4th, 2003. It was a small event with the majority of its approximately 90 participants coming from Göttingen. Two years later, the 2nd Horizons symposium "Decoding Nature - Hierarchy of Interactions" had already quite different dimensions: more than 200 participants were attracted by the impressive list of invited speakers presenting their latest research during thirteen lectures in four sessions. Among the speakers were Eric Westhof, Walter Gehring, Anthony Hyman, and Lewis Wolpert.

September 14th-16th, 2006, the Horizons Symposium went into its 3rd round and expanded even further: 18 renowned scientists presented their research in five sessions to approximately 300 participants from 25 countries. More than 100 posters were presented in three poster sessions and twelve students were chosen to give a talk in one of the three student talk sessions. The 4th Horizons Symposium, September 12th-15th, 2007, was an even greater success including over 300 participants representing 35 different countries. In conjunction with the symposium, more than 500 young researchers also had the amazing opportunity to explore career options at the first Horizons Career Fair. More than 20 companies and institutions provided a unique program of career presentations, CV checks, workshops and a live interview.

During the 5th Horizons symposium, apart from the, by now, "usual" program, during the Career Fair, young scientists were able to interact with scientists working in different fields in small groups in Brunch Club sessions. A highlight in the 6th Horizons was a panel discussion on career paths for scientists, featuring two professors at different stages in their careers, a study director from a pharmaceutical company and the head of global marketing of Roche Applied Science.

The 7th Horizons conference was special, since it coincided with the 10th anniversary of our graduate programme, the International Max Planck Research School for Molecular Biology. Special guests for the celebrations were two recent Nobel Laureates: Venki Ramakrishnan and Carol Greider. Additionally, there were alumni talk sessions in which six alumni shared their latest research not only with their former colleagues from Göttingen, but with all 300 participants. The 8th Horizons featured a novel concept of enhancing interaction between speakers and participants: the "Connectomics" session offered the possibility to discuss science in a relaxed atmosphere.

The 9th Horizons in 2012 built up on the tradition and knowledge gained during the last symposia and continued to provide young scientists with easy access to the most renowned speakers in their field and to enhance communication and collaboration in science in general. Always trying to improve ourselves, novel practical workshops in powerful research techniques like STED microscopy, NMR, Cryo-EM and mass spectroscopy were offered to further increased the attractiveness of this symposium.

And for our 10th anniversary last year, we celebrated, having a party with barbeque and live music at the end of the symposium.

The 11th Horizons was a particularly interesting one where two structural biology Nobel laureates were among the guest speakers; Ada Yonath and Alan Walker.

Last year, the 12th Horizons was once again, a hit, and the conference maintained its reputation to satisfy with a group of dynamic and interactive speakers. We hope to continue to deliver opportunities for scientific exchange of the highest standards, and a friendly and stimulating setting, not only this year again, but also, for many additional years to come.

About Göttingen

The renowned university town of Göttingen lies in the center of Germany in southern Niedersachsen (Lower Saxony) between the Harz mountains and the Weser river. Its establishment dates back to 953, it was chartered in 1210 and flourished as a member of the Hanseatic League.

A glimpse of this hanseatic opulence is still present today in the medieval Town Hall, the splendid churches and quaint half-timbered houses in Gothic, Renaissance and Baroque styles. Göttingen's landmark is the "Gänseliesel", an art nouveau statue of a girl herding geese on top of the fountain on the market square, outside the Old Town Hall. Traditionally, all new doctoral graduates of the University kiss the cheeks of the statue after passing their examinations, making her "the most kissed girl in the world".

The Georg-August University was founded in 1734 and today has 14 faculties with 24,000 students. The university sends forth many famous scientists – amongst its alumni are 42 Nobel laureates. Especially many famous mathematicians come from Göttingen: Carl Friedrich Gauss, Bernhard Riemann and David Hilbert, to name only a few.

Apart from the university, the city is also home to many research institutes, such as Max Planck Institutes, and international companies.

Nearly untouched by bombings in World War II, the city center is now an attractive place to live in with many shops, small cafes and chic bars. Consequently many students live here, giving Göttingen a young face: in 2003, almost half of the population of the inner city was between 18 and 30 years of age. Today Göttingen has approximately 130,000 inhabitants including 24,000 students, giving it the charm of a small and lively university city.

You can find further information on Göttingen in the yellow booklet in your bag, during the city tour and of course online (www.goettingen-tourismus.de).



Social Events

Horizons is not only about scientific exchange but also building personal contacts with people in your field. A long standing tradition of the symposium is to organize social events so that the participants and speakers get a chance to interact in an informal setting. This year we will be hosting the following activities:

Join us for a Beer!

Following a day full of scientific talks and discussions, we invite the participants and speakers to join us in exploring the colorful nightlife of Göttingen. We will visit one of the local's favorite bars to experience the lively atmosphere. It is a great opportunity to form new friendships over a glass of traditional German beer.

Location: LOKALneun, Kurze-Geismar-Straße 9, 37073 Göttingen

City Tour

Göttingen is a small university town in the heart of Germany where science meets culture. From the statue of the Gänseliesel (the most kissed girl in the world! ;)) to the cobbled streets and half-timber houses that have been preserved since the 1700s, the guided city tour will give visitors a glimpse of this beautiful quaint city.

Start: Gänseliesel statue in the city center

Dinner and Party

It has become a custom of our symposium to organize a party of participants and speakers on one of the last days of the conference. We host various kinds of tasty finger food at the buffet and a large contingent of free drinks. It is a good occasion to get to know the other participants and some of our speakers and to celebrate new friendships over a couple of drinks.

Location: Paulaner, Düstere Straße 20A, 37073 Göttingen

Wine and Cheese

During one of the poster sessions, a wine and cheese tasting is organized, where a great variety of cheese from different places will be served. With a glass of wine in hand, you can have candid discussions regarding the research of young scientists from all parts of the world.