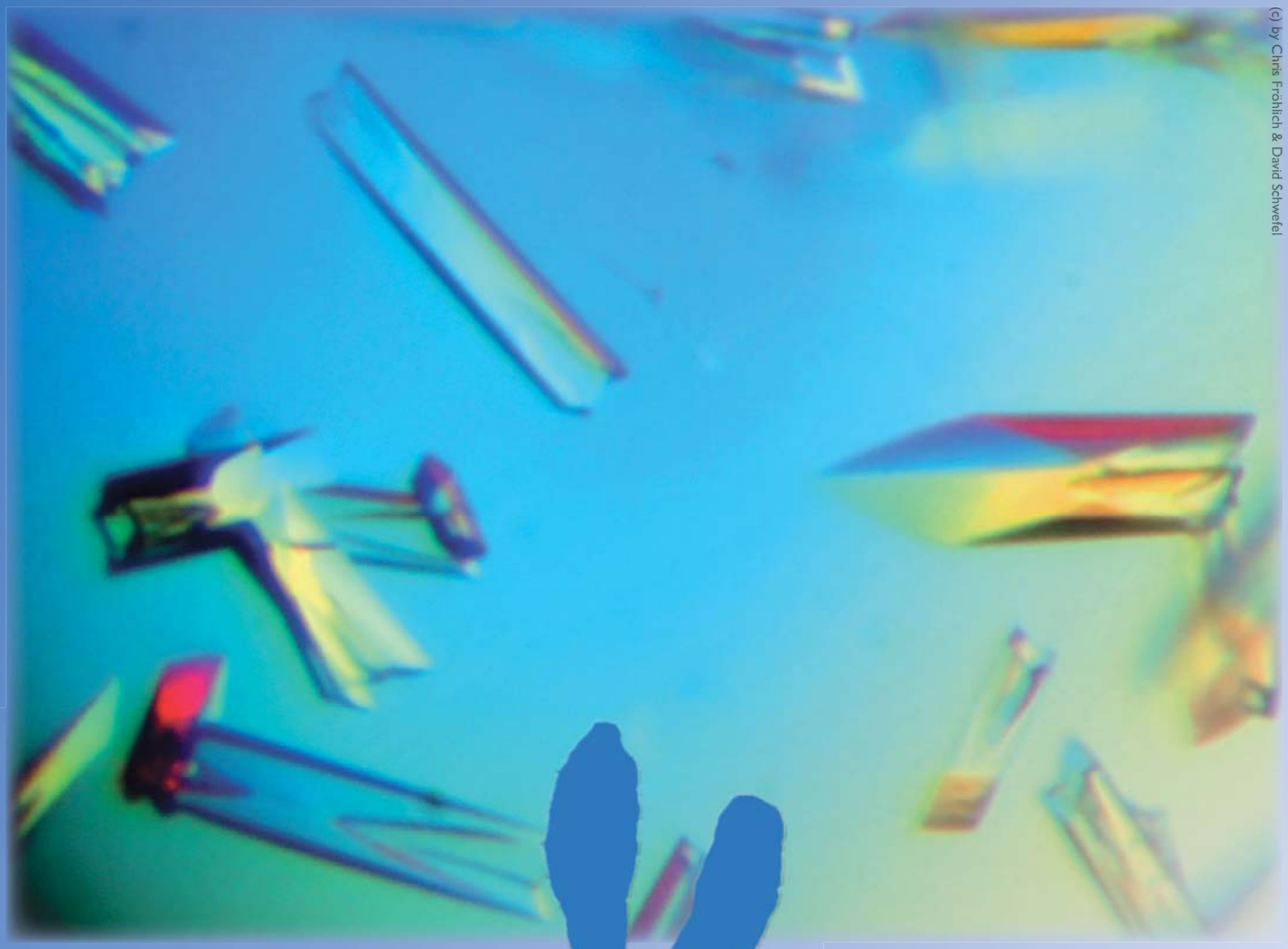


(c) by Chris Fröhlich & David Schwefel

VOLUME I ISSUE I October 2009

maX

The PhD student newsletter of the MDC

It's here !!

Presenting Hermann's new offshoot maX

Meet the beer hour team: Matt & Tiago

Interview with Janet Rossant

HELMHOLTZ GRADUATE SCHOOL Molecular Cell Biology

MDC MAX-DELBRÜCK-CENTRUM FÜR MOLEKULARE MEDIZIN BERLIN-BUCH
IN DER HELMHOLTZ-GEMEINSCHAFT e.V.

EDITORIAL

Who is maX?

The PhD student Newsletter has entered a new phase. **maX** was born out of the idea that the PhD student Newsletter should be more than a one-way communication from the Graduate Office to the students. We want to make this an interactive platform from which PhD students can communicate within the campus and to anyone on campus, strengthening the PhD student network at the MDC. We want it to be a way to present to the rest of the campus the interests, concerns and ideas of the MDC students. What do we do? What occupies our minds and our time? What do we need and what do we miss (a swimming pool on campus!)? We want **maX** to bring closer together the more than 200 PhD students that are working at the MDC, as well as let the other more than 1000 colleagues of our institute know who we are.

You will see obvious changes – such as the layout, but dig deeper and you will find how we have included novel content in this first issue of **maX**. You will find the familiar sections, such as announcements of external training courses and workshops, Publication Highlights or PhD student introductions. We also include, as before, little reports on excursions and activities on campus, but now with contributions by PhD students. Finally, we are happy to present completely new sections. In **Schokopause**, we will present to you people who are accomplishing a specific task on campus. In this issue, we focus on Matt and Tiago, the organizers of the beer hour. In **Attention Please**, we will feature an interview with a famous scientist; this time we have interviewed Prof. Janet Rossant, one of the leading stem cell biologists. The section **One day in …** will introduce a research topic of one of the MDC groups written in an understandable way for anyone outside of the field. We start with the group of Oliver Daumke. Also, don't miss the last page, where we include PhD comics and a selection of **Berlin's HotSpots**.

And why is this newsletter now called **maX**? As you all may know there is an official newsletter from the Helmholtz Society called **Hermann** - the name of our beloved research society. It was pretty obvious that Hermann's little brother had to be called **maX**, don't you think!?

Right now the new editorial team of **maX** is composed of two students, and of course happens with all the support and help from the PhD Office. Feel free to contact us at any time with your comments, ideas and collaborations! We'll be happy to welcome you to the team or include your articles or ideas. Let us know how you want to be a part of **maX** by writing us an e-mail to maXmoeglich@mdc-berlin.de. We hope you enjoy the flavor of this new MDC publication and we hope to see many more issues that will become true with your help.

Have a good read!

The maX Editorial Team
Nuria Cerdá-Esteban
Chris Fröhlich

Contents

maX is an internal publication of the Max-Delbrück-Centrum für Molekulare Medizin Berlin-Buch, Robert-Rössle-Straße 10, 13125 Berlin. Published quarterly.
Editors: Nuria Cerdá-Esteban (AG Spagnoli), Chris Fröhlich (AG Daumke)
Artwork: Julia Schuster
Contact: maXmoeglich@mdc-berlin.de, +4930-94063275

Who is Nuria? / CF

To know Nuria means to know a woman who bakes the best Zwetschgendatschi and cooks the best Tortilla on the planet. Nuria is one of those characters who are interested in a lot more than just mice and stem cells. To see her on the campus during her daily coffee breaks (Nuria is a desperate caffeine junky) is always a good chance to hear some interesting news of Berlin's cultural life. Knowing this it is not surprising that Nuria was a member of her university's choir Camerata vocalis when she studied at the Eberhard Karls Universität Tübingen and of the gospel choir at the University of Oregon. Nuria definitively knows how to come down after a hard working day in the lab.

The maX Team

Born in Requena (Spain), a region well known for its robust red wine, Nuria moved to Valencia at the age of 1 1/2, where she was raised and enjoyed the easy Mediterranian way of life. Her full name, Nuria Cerdá-Esteban, really sounds all-Hispanic but unfortunately she grew up bilingually and misses the tingling Spanish accent. Nuria moved to Tübingen at the age of 18 to study Biochemistry. Her first contact with the research world was at the University of Oregon in Eugene (the hometown of Jebediah Springfield), where she spent a year as an exchange student. During her Diplom project she worked in the group of Prof. Nüsslein-Volhard, where she investigated the genetic mechanisms of zebrafish sex determination and differentiation. Nuria joined the group of Francesca Spagnoli at the MDC in December 2008 to study the molecular mechanisms underlying the cell fate decision between liver and pancreas in the mouse, funded by the HGS-MCB. Unfortunately, Nuria has not found a new choir in Berlin yet, so just give her a call if you know something special.

Being in Berlin for nearly a year, Nuria has discovered her favourite Sunday activity: just listening to spontaneous singers at the Bearpit Karaoke in Prenzlauer Berg's Mauerpark. "It's the best thing you can do if you just want to have some fun and to pick up some good vibrations!" As a fan of Vietnamese Cuisine, Nuria knows where to find the best Pho in Prenzlauer Berg, like in Onkel Ho, one of her favorite Vietnamese restaurants. Besides, Nuria likes to chill in Mitte next to the Monbijou Park and the Museums Insel: "A place where I really like to be".

Who is Chris? / NCE

If you've seen Chris around campus before, either holding a bottle of Jever during beer hour on a Friday, or a glass of Latte macchiato during a coffee break on the back side of the MDC's main building, you might have noticed that he usually remains true to his last name, Fröhlich. Or maybe you met him in a more serious attitude, presenting his poster on the structural and functional analysis of human Ewing's sarcoma protein during the PhD retreat or receiving a prize for the best picture of this year's Long Night of Science scientific imaging contest. Chris is one of those researchers who knows how to work hard and play harder.

Born and raised in Lutherstadt Eisleben, on the eastern spur of the Harz Mountains, Chris, the youngest of four brothers, left this idyllic environment to study Engineering in Medical Biotechnology at the TU in Berlin. His first research projects dealt with the development of molecular-based diagnosis for *Leishmania* and *Eimeria* parasites, first in the group of Dr. Gabriele Schönian at the Institute of Microbiology and Hygiene in Berlin, and then at the Central Veterinary Research Laboratory in Dubai. Later on he found his true calling as a protein crystallographer and decided to join Oliver Daumke's group at the MDC in 2008, first as a Diplom student and since April 2009 as a PhD student within HGS-MCB. Chris is interested in elucidating the mechanisms of membrane remodeling by the GTPases of the dynamin superfamily using protein crystallography and he has written a wonderful article presenting the research focus of his group, which you can read on page 13.

During the past 9 years in Berlin, Chris has found way more than his passion for crystals. He has started practicing exciting disciplines: climbing and diving (he's desperately looking for a diving partner, so drop him a line if you're interested!). He has discovered his favorite place in Berlin to chill and enjoy a romantic view of the city: the Teufelsberg. Most importantly, he has found the district most appealing to his personality, Kreuzberg, full of special places he cherishes, like the Italian restaurant "Rocco und seine Brüder", where he loves to drink Augustiner beer from tap and eat a pizza Quattro Formaggi. However, if he cooks at home, which he loves to do for friends, he will choose a more sophisticated menu, like "lamb sirloin with sweet potatoes on a bed of green beans wrapped in bacon". As a desert, though, I am sure he will stick to his guilty pleasure: Knusperflocken.

Would you like to be a part of maX?
Do you enjoy writing on scientific topics or general campus news?
Are you a talented graphic designer?
Do you enjoy photography?
We can use your help!!!
maXmoeglich@mdc-berlin.de

We would like to thank our collaborators in this issue:

Damir Omerbasic (AG Lewin)
Kristin Petzold (AG Spagnoli)
Igor Pongrac (AG Spagnoli)

ATTENTION, PLEASE

Interview with Janet Rossant / NCE

There are scientists who feel passionate about a certain technique, a group of proteins or a specific cell type. In the case of **Dr. Janet Rossant**, you can tell that the mouse embryo is what makes her heart beat faster. In her graduate years, she conducted now-classic experiments on the determination of cell lineages within the mouse embryo. Ever since, she has been devoted to defining the signals that pattern the embryo. She is one of world's leading stem cell biologists, also involved in the development of ethical guidelines for stem cell research. Currently, she is a Senior Scientist at the Hospital for Sick Children in Toronto and a University Professor at the University of Toronto. She is a Fellow of both the Royal Societies of London and Canada, as well as Foreign Associate to the National Academy of Science. But most importantly, she is a very approachable investigator, always willing to share her knowledge and experience with students. During this year's PhD symposium "Horizons in Molecular Biology" in Göttingen, she spent some time answering questions for **maX** about juggling a private life and a scientific career, the history of the mouse as a model organism in biology, and the future of human embryonic stem cell research.

Who was your source of scientific inspiration during your studies?
It all began when I was an undergraduate and I was taught by **John Gurdon**, a very famous developmental biologist. My inspiration came from lectures, hearing about how frog embryos develop. I think it's always important to hear the best people in your field talk about their work, because it really inspires you to go on.

Sir John Gurdon was the first researcher to describe the cloning of an animal (*Xenopus laevis*) by somatic cell nuclear transfer. *Gurdon, J.B. 1962. J. Embryol. Exp. Morphol. 10:622–640.*

Was there an event in your scientific career that was crucial in bringing you to where you are?
One of the things that of course made a difference to my career is that I started it in the UK, in Oxford and Cambridge, and I'm not there anymore. That had nothing to do with science, it's because I met a Canadian and moved to Canada. But when I look back, that was a good decision. Things have gone very well for me in Canada. Sometimes you have to follow your heart as well as the science.

What are some of the strengths and weaknesses that you have found about yourself that help or difficult your work in science?
You're never finished learning, first of all. For me there's a constant struggle of trying to learn new approaches: systems biology, imaging, computation. It doesn't get any easier, you know, there's only 70 neurons left there (*pointing at hear head, laughing*). If you can't do it yourself, it's important to find collaborators, and I think I'm pretty good at that. What I could do better is make sure that everybody in the group is getting the same attention. You work with so many people in your lab and you do your best to support and encourage them, but I know that I don't do that for everybody the way I would like to do.

We see many women that are doing their PhD in science, but we see less female group leaders than male. Does it have to do with the chances that we (women) get or the choices we make?
That's a very difficult question. Largely, women are taking themselves out, because it is difficult to balance a career, a family, and all those pressures that come all around the same time. And particularly in academic science, the time when you are going for tenyard is about the time when your biological clock is ticking. I have a husband, I had children, and it's never easy. A supportive husband is incredibly important. But I know some very famous women scientists who managed to bring up children without the support of husbands; they're single mothers and yet they are some of the best scientists you could imagine. I think you have to be driven and you have to learn to compartmentalize your life: focus on the science, but also on the other parts of your life.

So a lot of it is about being passionate?
Yes, science and research are incredibly exciting, there are always new things to find. But as I'm sure you and everybody knows, there's a lot of times when it is very depressing. The experiments don't work, the grant hasn't come through, "why did Nature reject that paper?". There's a lot of ups and downs, and in the end of the day, the passion for discovering something new that hasn't been found out before is really what drives most people. If you don't have that passion, it's not going to work.

You were very passionate for the mouse from early on. When you started your work in the mouse, did you imagine that it would become such an important model organism as it is now?
No, because at that time, certainly in developmental biology there were only a handful of people who were working on the mouse as a system. It was difficult to work with and there was no way to make mutations in any genes. We didn't understand any of the genetic control and development, and people used to think of it as something different *(than other genetic model systems like Drosophila and C.elegans)*. It seems bizarre now, because we know that the main genetic components that pattern the body plan are conserved wide across the evolution. And yet we didn't understand that until people started to find the homeobox genes, and that those were conserved. After that, it became obvious that there was going to be a huge amount of conservation. That's where mouse came back into the zone: we could not only show that the genes were similar, but that once you could get targeted mutagenesis, you could make mutations in those genes and understand their function. That was the revolution in mouse genetics and developmental biology and put mouse ahead of many other systems where you couldn't do that.

So sometimes it's all about surprises. What was your most suprising discovery, or your favorite one?
I also find the one I like the best, and it comes back to this issue of conservation of genes. Certainly we all believed the Hox genes were conserved, the data on that were very strong. It wasn't so clear what happened to the front and the back of the

Prof. Dr. Janet Rossant

embryo. There were a number of genes in *Drosophila* that were involved in head development, including Orthodenticle. There were sort of related genes in mammals, but you know, the head of a Drosophila and the head of a mouse? (*She gestures as to indicate both are extremely different*) I always remember when **Siew-Lan Ang**, then a postdoc in my lab, cloned *Otx2*, which is the mammalian ortholog of *Orthodenticle*. She just called me to the microscope one day; she had done an in situ with *Otx2*, and there was the expression, boom!, in the head of the mouse embryo, with a straight line to the back end. So that gene has to be involved in anterior development across the evolution!

What do you think is going to be the seminal contribution of developmental biology in the next ten years?
There's a feeling that in developmental biology we're now into the details. That's probably right, in terms of understanding basic embryonic development. Once we got over the fact that we could understand the basics, how a body plan is put together and the nature of signaling pathways, we are at the details. Those are very important details: we've got to understand the processes, how cell morphogenesis works on a mechanistical level, and how cells integrate signals to enter an output that is a specific cell type or an organ. Where we need to see it move is use developmental biology as a tool to understand the etiology of specific human diseases, and then of course to be able to make stem cells into the right cell types that you could eventually use to cure disease. I think that we need to see the applications move forward. It doesn't mean to say we should stop doing developmental biology, not at all, because the basic development is what's needed. But we need to be thinking a little bit more about translational aspects. We all used to write that in our grants, but now we have to put our money where our mouth is and show that's going to work.

You talked about stem cells. Do you think that the research in human embryonic stem cells now that we have induced pluripotent stem (iPS) cells is going be over now or do we still need human ES cells?
We still need them for the moment, because they are the sort of gold standard. We don't actually understand what a human ES cell is compared to the mouse ES cell, but we know they come from an embryo, so they're certainly close to the beginning of development, and we know about their differentiation power. At this point we're going to see a continued need to compare the two systems. But what I do think is that the people who are concerned about the derivation of human ES cells from embryos are probably in the right in the sense that there's not really a need to derive new human ES cell lines, unless we can derive them in a different way, so they have properties more similar to the mouse. There are some practical reasons why it would be nice to get a mouse-ES-like human ES cell: mouse ES cells are a lot easier to grow, they're easily dissociated and genetically manipulated. I think the next phase will be human iPS cells, there's no question, because you can make them from such a wide range of the human population, you can study in them human genetic diversity, and you can look at people who carry genetic predisposition to a certain disease. But all that requires that they differentiate in culture so you could actually study that disease. And to do that, you have to understand development!

Are we very far from cell-based therapies?
I don't think we're very close in many areas. There are still some big issues, certainly for ES cells the biggest issue is whether they are safe, whether they can be transferred without some residual tumorigenicity. We know that in ES and iPS cells the tumor suppressor pathway is downregulated. We've got to get rid of that property out of the cells. When they differentiate they're fine, but are you sure that you haven't carried over one stem cell? Then the next issue is if you can make the right cell types for transfer. I think we're a long way from those. There are some that are closer, like retina pigment epithelium which could be used in macula degeneration. I do believe that type I diabetes is a good target because you have to make insulin producing cells that have high regulated levels of insulin, but you don't have to make a pancreas. There's clinical protocols to transfer them into the liver, where they could survive for some time and make a person insulin independent. In other cases ES cells will be used more as adjuvant therapy. The current clinical trial that Geron has, which is on hold at the moment, is for spinal cord therapy. But it is not for spinal cord repair, it's to help prevent some of the damage to the spinal cord, introducing cells that remyelinate cells. You're gonna see those kind of uses of stem cells. Whether it's ES or mesenchymal stem cells, which there are a lot of clinical trials for, they're mostly helping disease, they're not real cures. But still, that's a good step forward in many cases.

Do you think we're communicating enough to the public about this?
We have to constantly do that. Whenever I'm asked, I'll speak to the public about stem cells. And it's always very interesting, because there's a lot about stem cells in the newspaper, but still people don't fully understand what they are, where they come from, what they can do… And this is an area of science that's relatively easy to explain to people. We have to continue to do that if we want our research to be funded and if we want our work to go forward in an area that is in the public domain and can be ethically concerning.

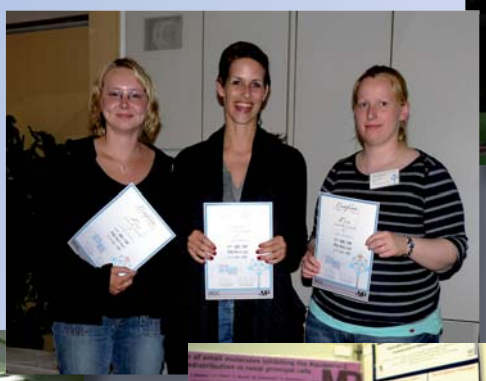
Beautiful landscape next to our hotel in Kremmen

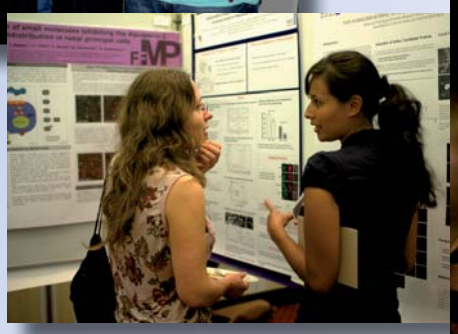
The 11th joint MDC/FMP PhD retreat

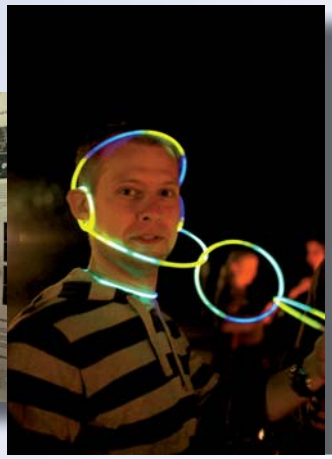
/ Damir Omerbasic

Life in Science – Science in Life.

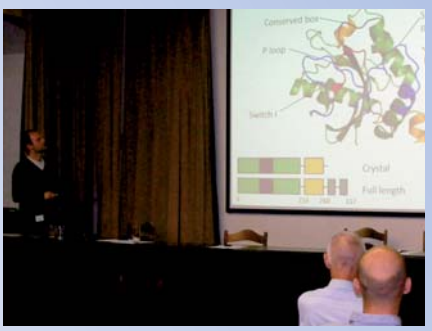
This was the motto of the 11th annual PhD Retreat 2009 for students from both the Max Delbrück Center and the Leibniz Institute for Molecular Pharmacology. The Retreat, organized jointly by PhD students from the MDC and FMP, took place from 3-5th September 2009 at the Hotel Sommerfeld in Kremmen, outside Berlin. Around 130 participants spent three exciting days discussing science during six sessions that covered all the research interests of the two institutes. Participants were welcomed by the Scientific Director of the MDC, **Prof. Walter Rosenthal**, who pointed out the importance of Retreats for young scientists. Keynote lecturers opened each session and it was our privilege to listen and learn from **Stephen Minger** (session Neuroscience), **Michael Sattler** (Structural Biology), **Stephan Baldus** (Cardiovascular Research), **Carsten Watzl** (Immunology), **Nancy Hynes** (Cancer) and last but not least **Elisa Izaurralde** (session RNA). Each session included talks by students – 18 in total – giving an uneasy task to the special jury to vote for the best presentations of the meeting. This year's best presentations were given by **Sina Meyer** (FMP), who won the first prize, and **Nora Bergmann** (MDC) and **Janet Zapke** (FMP), who were the first and second runner-up. We should definitely say that the jury was grateful for not having to choose the best of the 103 posters presented by students during the two poster sessions. In addition, it is worth mentioning that the round table discussion "*Careers in Science*" drew much interest and lively discussion with **Willy Kinzy**, **Christiane Nolte** and **Jürgen Meier** who, after finishing their PhD, pursued their careers outside academia. Bearing all this in mind, the Organizing Committee still gave their best to turn students' attention away from science for a moment, providing participants with a bonfire, night walk around the lake and free beverages in the evening. In brief, the members of the committe (**Sebastian Auer, Uta Baddack, Olivia Ebner, Fabian Hosp, Bernhard Meinecke, Florian Müller, Ulrike Sack, Claudio Shah, Grietje Teßmann, Rossukon Thongwichian, Uta Wrackmeyer**) did a wonderful job at organizing this retreat! We hope to see you (again) next year at the 12th joint MDC/FMP PhD Retreat 2010.







12th Heart of Europe Bio-Crystallography Meeting in Třešť (Czech Republic) / CF



David's outstanding performance at the 11th HEC meeting

The Heart of Europe Bio-Crystallography meeting (HEC) has been organized yearly since 1998. The topics discussed at the meeting are structural biology related and thus lots of interesting protein structures are presented within the talks. This year's meeting took place from September 24th to 26th 2009 in the Academic Castle in the charming little town of Třešť (try to pronounce this!) situated in South-East Bohemia, about two hours travel by car from Prague. Eleven scientists from the groups of **Udo Heinemann** and **Oliver Daumke** attended the meeting. **Harald Striegl** (AG Heinemann) and **David Schwefel** (AG Daumke) both gave very nice talks at the conference. Harald presented his work on "Unusual armadillo fold in the human general vesicular transport factor P115", whereas David gave a talk on "Structural insights into the GIMAP family". Besides, other interesting talks were given by PhD students from Germany, Austria, Poland and the Czech Republic. **Paul Emsley** (Oxford, UK) informed in his very entertaining talk about the recent version of Coot, an open source software used to display and manipulate atomic models of macromolecules. On Friday, the organizers of the conference invited all partipiciants for a short trip to the picturesque city of Telč which is also known as the Venedig of Moravia. Altogether the 12th HEC meeting was not only an opportunity to get an insight into which problems other crystallography students are faced with, but also to make new friends and to come in contact with leading experts of the field.

Horizons in Molecular Biology / Kristin Petzold

The 6th International PhD Student Symposium "Horizons in Molecular Biology" and the "Career Fair For Scientists" held in Göttingen this year from September 9th to 12th were organized by the International Max Planck Research School for Molecular Biology. This year, it hosted 20 senior scientists, 75 young researchers from 12 different countries and representatives from various companies.

The symposium "Horizons in Molecular Biology" featured keynote lectures, student talks and a poster session divided into five sections: cell biology, developmental biology, neuroscience, structural biology and biomedicine.

In the daily lectures, 20 senior scientists and 8 young researchers talked about their recent work. In addition to the lectures, a poster session gave 67 young researchers the opportunity to present their current work.

The „Career Fair For Scientist" offered an exciting program of workshops (Assessment Center Training, How to apply for a Post-Doc fellowship, Science in 3D: Life Sciences Entrepreneurial Training in Virtual Worlds), CV checks and presentations about a career in academia or industry. In a podium discussion with representatives of the university, industry and a Max Planck Institute the pros and cons of various career paths were discussed and provided first-hand insights into how the representatives came to crucial career decisions. Most useful was a live job interview of two participants moderated by Roche Diagnostics, after which the positive and negative aspects of the job interview were discussed.

I strongly recommend the „Horizons in Molecular Biology" to other students that are visiting their first international conference, because the meeting is held close to Berlin in Göttingen, it has a familiar atmosphere and it is a good background for learning how to present a poster or a talk on an international meeting. Second, the meeting gives a good overview on different thrilling topics in molecular biology. The „Career Fair For Scientist" can be visited without paying the conference fee and is nice for students in their first years of PhD to orientate their career way in the future. But for students in their last year, the „Career Fair For Scientist" is even more interesting, in order to establish first contacts to well-known companies.

Course Molecular Embryology of the Mouse (Cold Spring Harbor Laboratories) / NCE

View from the CSH Campus

If you want to learn techniques in mouse embryology, either if you are new to the system or if you just find yourself stuck with that mutant that you are not sure how to characterize, Cold Spring Harbor's Mouse Embryology Course is the way to go. Every year, 14 students from around the world are selected to paticipate in this intense three-week seminar. Two instructors organize lectures by some of the world's best mouse geneticists (a total of around 30 speakers) which cover the basics in mouse development, embryonic stem cells and transgenesis techniques. During the laboratory practices, the speakers and instructors will teach you the most important techniques in mouse molecular embryology, from embryo disection to *in vitro* culture of whole embryos, but also production of chimeras or derivation of embryonic stem cells. I had the chance to be a participant in this year's course and it was an incredible experience which gave me a head start in the model system, but also helped me make many contacts to investigators and students - after all, the social activities (many hours at the bar, parties, scavenger hunt...) were as important as the lectures and lab time! So if you are using the mouse as your model organism and think you could profit from some teaching by excellent and committed researchers, don't doubt to apply for next year's course! The application deadline is March 15th. You can find more information on the course website: http://meetings.cshl.edu/courses/c-mous10.shtml If you have more questions, do not hesitate to contact me: nuria.cerda-esteban@mdc-berlin.de

Summer School 2009 / Annette Schledz

Once a year the Graduate office organises a summer school which is open to every PhD student at the MDC. This year's event took place from 22-30 June and courses on offer ranged from a three days workshop in "Publishing in peer-reviewed Journals" over "Visualisation of Data, Scientific Graphics & Presentation Skills" to "Applying for a job: CV, Cover Letter" and "Job Interview Skills". The previously announced workshop "Academic Time and Project Management", as well as "Presentation Skills", had to be cancelled at short notice. They were given on 24 September instead.

Since places for the workshops within the summer school are given on a first come first serve basis and since most of them are great in demand it is advisable to register as soon as they are announced.

If you feel you need to improve further skills or if you have ideas for future workshops we look forward to your helpful suggestions!

Jorge Cham's talk on "The Power of Procrastination" / Igor Pongrac

Overcrowding, excitement and curiosity – these words best describe the Dahlem Colloquium on October 14th 2009 at the Max Planck Institute in Berlin. This is definitely the best indicator of the world-wide phenomenon connected to **Dr. Jorge Cham** and his phantastic comic strip "Pilled Higher and Deeper" (PhD). I attended this lecture, a part of his tour "The Power of Procrastination", in which he talks about the origins of his comic, his grad day's experience, as well as major sources of grad student anxieties and dilemmas.

Igor with Jorge Cham

This comic had its humble first appearance in 1997 in The Stanford Daily and soon become a worldly known and recognized comfort for grad students who instantly felt a connection to the main characters and their life (or lack of it). Today this comic's webpage counts 12000000 visits every month, connecting grad students from over 800 different fields of study and over 1000 different schools worldwide. The lives of Jorge Cham's character introduce a world of shaky self-confidence, impossible lab conditions, long working hours and low salaries, as well as the special relationship between PhD students and their mentors and faculty in general.

The author's remarkable spirit and hilarious wits allow this comic to win the instant sympathy and commitment of an audience that always comes back for more and more. Nothing else remains but to give you the webpage address and with that a one-way ticket to a remarkable journey with Mike, Cecilia, Tajel and Nameless Hero:

http://www.phdcomics.com/

Publication Highlights

Congratulations to our fellow PhD students who just saw their excellent work published!

Marlon Stoeckius, Jonas Maaskola, Teresa Colombo, Hans-Peter Rahn, **Marc R Friedländer**, **Na Li**, Wei Chen, Fabio Piano & Nikolaus Rajewsky (2009) Large-scale sorting of C. elegans embryos reveals the dynamics of small RNA expression. Nature Methods 6, 745 - 751

Hannes Schmidt, **Agne Stonkute**, René Jüttner, Doris Koesling, Andreas Friebe, Fritz G. Rathjen (2009) C-type natriuretic peptide (CNP) is a bifurcation factor for sensory neurons. PNAS 106 (39), 16847-16852.

Ann-Marie Bröske, **Lena Vockentanz**, Shabnam Kharazi, Matthew R. Huska, Elena Mancini, Marina Scheller, Christiane Kuhl, Andreas Enns, Marco Prinz, Rudolf Jaenisch, Claus Nerlov, Achim Leutz, Miguel A. Andrade-Navarro, Sten Eirik W. Jacobsen and Frank Rosenbauer (2009) DNA methylation protects hematopoietic stem cell multipotency from myeloerythroid restriction. Nature Genetics. Published online: 4 October 2009

Is there an event you would like maX to report?

You can write a text and e-mail it to us
or
just drop us a line and we'll come talk to you, get all the information and write a nice story on it.

maXmoeglich@mdc-berlin.de

SAVE THE DATE

The next Helmholtz Check Up

Dear colleagues of the Campus Buch! For all of you haven't heard about the Helmholtz Check Up yet: life is not all about work.
Early this year four PhD students, namely **Anne Katharina Wübken, Florian Ernst Paul, Claudio Shah** and **Chris Fröhlich**, decided to re-establish an event that has given rise to legendary stories. If you always wanted to see your PI dance wildly to the tunes of the best DJs, wake up with your face glued to the bar or get to know that person you always see on the 351 bus, get ready for this!!! The last Helmhotz Check Up (April 25th 2009 at Mädcheninternat) was well-frequented: more than 600 ravers from institutes all over Berlin rallied round the DJs on two floors.
The next Check Up is going to be soon and the acquisition of location, bands and DJs is within the hot phase. We don't want to reveal too much, but one thing we already can blow: we're in contact with the famous Russian Ska / Jazz / Pop-Punk band **skaZka Orchestra** to perform at **Check Up II** and they are really interested to see the Berlin scientists' dancing skills! So we hope to see you on the dance floor!
To be continued…

Trip to Lübeck

The Graduate Office is organizing a trip to **Lübeck** on Sunday, **November 29th**! Lübeck, a charming city located next to Hamburg, is on UNESCO's list of World Heritage Sites thanks to its Brick Gothic architectural heritage. We will go by train and visit the old town and the

"Weihnachtsmarkt" (Christmas market). Don't forget that Sunday 29th is the first Sunday in Advent, the cold but wonderful pre-Christmas time, so you will be able to buy some delicious sweets or Christmas presents at the charming market.
If you are interested in this trip, contact **Ida Vase** at ida.vase@mdc-berlin.de. More information will follow shortly by e-mail.

Workshops and courses

EMBO Workshop "Visualizing Biological Data (VizBi)"
Heidelberg, March 3d-5th 2010
Registration deadline: November 16th 2009
http://www.embl.de/training/courses_conferences/conference/2010/VIZ10-01/index.html

Wellcome Trust Course "Virus Discovery in the Clinical Setting"
Hinxton (Cambridge, UK), March 7th-12th 2010
Application deadline: November 6th 2009
http://www.wellcome.ac.uk/Education-resources/Courses-and-conferences/Advanced-Courses/Courses/WTX056368.htm

EMBO Workshop "Hedgehog signaling: from developmental biology to anti-cancer drugs"
St. Jean Cap Ferrat (France), March 27th-31st 2010
http://www.embo.org/events/calendar/workshops.html

CSHL Course "Protein Purification & Characterization"
Cold Spring Harbor, NY (USA), April 7th- 20th 2010
Application deadline: January 30th 2010
http://meetings.cshl.edu/courses/c-ppc10.shtml

CSHL Course "Cell & Developmental Biology of Xenopus"
Cold Spring Harbor, NY (USA), April 9th – 20th 2010
Application deadline: January 30th 2010
http://meetings.cshl.edu/courses/c-xeno10.shtml

Wellcome Trust Course "Technologies and Applications for Genome Analysis"
Hinxton (Cambridge, UK), April 18th-27th 2010
Application deadline: November 27th 2009
http://www.wellcome.ac.uk/Education-resources/Courses-and-conferences/Advanced-Courses/Courses/WTX026218.htm

Berlin Brain Days

The 6th International PhD Symposium on Neurobiology, "Berlin Brain Days", will take place this year from December 9th to 11th at the MDC. This year's keynote speakers are **Elly Tanaka** from the Center for Regenerative Therapies in Dresden, **Nancy Kanwisher** from the MIT, **Gábor Tamás** from the University of Szeged, **Thomas Möller** from the University of Washington, **Wolfgang Kuschinsky** from the University of Heidelberg and **Andreas Bartels** from the MPI for Biological Cybernetics. Don't miss this opportunity to listen to interesting talks and present your work with a talk or a poster! Apply now until **November 1st!**
More information under www.neuroscience-berlin.de/bbd/

Friday afternoon at the MDC: an interview with the beer hour organizers / CF

If you work on the MDC campus you already have heard about the beer hour. If not, you probably delete your luser mails prior to reading them or you leave the campus on Friday before 4 p.m. The beer hour is an every Friday event organized by Matt Huska and Tiago da Silva Lopez, two bioinformaticians who work in the Hermann-von-Helmholtz Haus. Matt, an originary of Ontario, Canada, has a Bachelor in Mathematics and Computer Science from the University of Waterloo. He came to the MDC in October of 2007 to work in the group of Miguel Andrade, where he runs the Bioinformatics Core Facility Analysis. Apart from beer and computers, he likes soccer, photography and music. His partner in crime, Tiago, was born in Sao Paolo, Brazil, and studied Computer Science in Sao Carlos. Since April of 2007 he's been working on his PhD in Systems Biology in the group of Prof. Jens Reich, developing a mathematical model of iron metabolism in mammals. You might remember his talk at the PhD Symposium, for which he was awarded the 2nd prize. After long hours of work, he likes to cook with friends and do Brazilian jiu-jiutsu.

Matt and Tiago

Hey Matt and Tiago! Every Friday afternoon you organize the beer hour here on campus. Everybody is invited to drop by and have some drinks for 3,50€, talk about the week and check out each others' weekend plans. Whose idea was it?
Tiago: Did you say three fifty?
Matt: Tiago had worked at the EMBL before and I had gone to the EMBL to visit a course. I met some friends there, went to a kind of beer hour and I thought - we don't have anything like this at all. Tiago was thinking the same thing, so we just said: "Why don't we do it?"

There was no beer hour before at the MDC?
Matt: No, no, no, there was. Okay, of course there was. The first beer hour we went to was probably the one from Matthias Selbach. Their lab did one. And their idea was just that somebody else will pick it up. They just wanted it to be like the one of the EMBL, where it rotates and different labs take responsibility. And so they did one and then nobody else did one (*Matt looks at Tiago and both start to laugh loudly*). Some months went by and Tiago and I said we should try doing one. And then - (*Matt pauses, thinks and stares holes in the air like he's remembering a glorious moment*) - we just grabbed a bunch of beers, set them up, people drank them and then we did it again the next week. And it just went from there…

In my opinion it's a big success story!
Matt: We've definitely learned a little bit from the first time. I think the first time we did the beer session we went by bus

I've seen you with some cases of beer on a Friday morning in the 351…
Matt: Yeah, we went up there just carrying like six cases of beer on the bus (*Tiago is still grinning to Matt*) and brought them back and then - I think the first two weeks were like that.

And now?
Matt: And now we got a driver. Somebody drives; it's different people always helping.

So always somebody helps you by car?
Tiago: Yep! Always somebody volunteers ... I think Matze helped a few times, Tobias, Boris, Dana Lafuente, Florian has driven a few times. I think that's mostly it.
Matt: Some other people stepped up, like if both Tiago and I have something going on. Dominik has ran a beer session before, Florain has ran a beer session and a lot of people stepped up to help. Right now we started it and everybody else takes it from there.

How much time do you invest to organize the beer hour every week?
Matt: I don't know – one minute to send the mail and maybe 45 minutes to pick up the beer and then the rest is… nothing.

Who decides which kind of beer you take?
Matt: It depends. Whoever drives gets the first choice and then we just buy whatever people drink. So we bought some of these like…
Tiago (*laughs*): Beck's Ice and Beck's lime and such stuff…
Matt: And nobody drank them for weeks…

Hey, guys, you're in Germany, people wanna drink BEER!
Matt (*laughs*): Yeah, you gotta try everything once, right!? So they were a big failure!
Tiago: People like this Flensburger, because it makes this sound when you open it (*tries to imitate the sound of opening a bottle of Flensburger*).

Have you ever had to pay something out of your one pocket after the beer hour?
Matt: Only the first one (*thinks, Tiago laughs*) or the first two… The first one for sure, because that one we just did a "donation" box. You know: donate – just give us much as you want. And pfffff… (*both are laughing*)
Tiago: Yeah, and we lost 50€ this week!

50€???!
Matt: Yes, and then we set the price. So I mean with 3 € per person a week we're on the edge, but we always make just a little bit so it's enough to keep us going.

At the end of the beer hour, who cleans up all the stuff?
Matt: Everybody helps right away. Whenever I stay to end, when beer runs out or when I have to go, I start putting a couple of bottles away and everybody just puts everything away, cleans everything up and it works fine.
Tiago (*smiling*): Yeah and then – up to the next bar!

During the summer time, the beer hour was an open air happening, behind the blue bear. Now it had to move inside this seminar room in the Hermann-von-Helmholtz building because it's getting colder. But it's probably a bit too small there. Have you thought about alternative places?
Tiago: I think here at MDC.C - people ask us to do it here, because they have couches. And it's bigger and perhaps more cozy and more comfortable.
Matt: I mean, the good thing is it's nice to be next to the bus stop. People walk by and say – "okay, I'll wait for one beer…"

Everybody knows what this means…
(Everybody laughs)

Do we have a permission to do it here *(at MDC.C)*?
Matt: No, not yet – but it should be no problem, hopefully.
Tiago: I think we ask Frau Langer. We just could stop by at her office after the interview…

Have you considered to do some special beer hours, like with DJs or bands and so on?
Matt: Yeah! It's certainly not something we would do every Friday, 'cause the number one rule of beer hour is "let's make it as simple as possible". Buy some beer, it's beer hour, that's the only key thing. But for sure maybe like a few beer hours in the summer will be more than just like that. We're also going to do a combined event with an international dinner, which will be on the 16th of October. And then also hopefully a party at the MDC in the summer….

Is there a budget from the MDC for things like this?
Matt: Apparently there is nothing. One thing people told us was: one thing we really can't do is give you any money (*both laugh*). So basically it has to be student run, but it's working okay so far.

After the beer is empty and beer hour is over, most people are in the mood continuing the cozy get-together. Do you think you are responsible for at least some new friendships - or even more - that have started at the beer hour?
Tiago: I've met my girlfriend at the beer session. And we said we don't need to do any beer session anymore now – so this is over (*laughs*). Enough! (*All laugh*)
Matt: Yeah, defintely. I think before the beer session I knew very few people here. You'd walk into the mensa and most people were strangers. It made a big difference.
Tiago: I hope people publish some paper together, at least come in contact …

May be you should be in the acknowledgements then? (*All laugh*).
Wouldn't a beer-related job be a good alternative to research?
Tiago: Beer scientist!
Matt: I don't know. I think we would get pretty tired of it after a while…

What is your favorite kind of beer?
Matt: I'm more the Guinness guy!
Tiago: I don't drink any alcohol.

And what is your favorite drink then?
Matt: Bananas and milk?
Tiago: Actually, yeah!

Thanks a lot!
Matt: Thanks to you, see you on Friday!

Did you know that...

6 people called Max have received the Nobel Prize. Can you guess who got it when and for what?

Max Perutz
Max Planck
Max Theiler
Max Delbrück
Max Born
Max von Laue

1954, for his fundamental research in quantum mechanics, especially for his statistical interpretation of the wavefunction

1918, in recognition of the services he rendered to the advancement of Physics by his discovery of energy quanta

1914, for his discovery of the diffraction of X-rays by crystals

1951, for his discoveries concerning yellow fever and how to combat it

1962, for his studies of the structures of globular proteins

1969, for his discoveries concerning the replication mechanism and the genetic structure of viruses

WELCOME OUR PHD STUDENT NEWBIES

Anna Christa

I recently joined the group of Prof. Thomas Willnow to work on the role of megalin/LRP2 in steroid hormone metabolism. I was born in Bamberg, Germany, and studied Biology at the Albert-Ludwigs-University Freiburg. My Diplom thesis was about the regeneration of the visual chromophore in cone photoreceptors. After obtaining my Diplom last autumn, I continued my studies on photoreceptors at Case Western Reserve University, Cleveland USA, before I came to the MDC.

Anna-Carina Jungkamp

I am joining the research group of Prof. Dr. Nikolaus Rajewsky within the scope of the MDC - NYU PhD Exchange Program in Systems Biology. I was born in Dortmund and studied Molecular Medicine in Freiburg. During my studies, I received a scholarship from the German National Academic Foundation. For my Diplom thesis I joined Prof. Dr. Tom Tuschl's laboratory at The Rockefeller University in New York, where I helped with the characterization of PURE-CLIP, a method that allows for transcriptome-wide identification of the precise RNA recognition sites of regulatory RNA-binding proteins. Besides science, I love literature, theater and classical music!

Aouefa Amoussouvi

I was born in Pithiviers in France. I obtained my BSc in Applied Physics in 2007 and my MSc in Molecular and Cellular Biophysics in 2009 at the Pierre and Marie Curie University in Paris. I spent one year in the Netherlands in Amsterdam as an Erasmus student for the first year of my Master's. I was introduced to spectrophotometry applications in Biophysics and Biochemistry during a summer school in Prague in August 2008. My master thesis was about the structure and the position within the plasma membrane of the alpha-synuclein protein using fluorospectrophotometry methods. I joined the Molecular Biophysics Group of Prof. Herrmann at the Humboldt-Universität zu Berlin for this project and will continue on the same subject and in the same work group for my PhD at the MDC.

Kun Song

I will focus on thermoregulation of the central nerve system in Dr. Jan Siemens' group at the MDC. I was born in Tianjin, a very beautiful and large city in the P. R. China. From 2002 to 2006, I studied at the Nankai University, one of the most prestigious universities in China, for my bachelor's degree. I was enrolled in the program of applied physics which mainly focused on biomedical physics. In the following three years (2006-2009) I studied in the program of biophysics at Nankai University for graduate training involving research of Ca^{2+} and NO signal transductions. By cooperation with others, I published 6 papers in scientific journals. In my spare time, I like to listen to music and play table tennis. I am also a soccer fan.

Leiron Ferrarese

I was born in Rome in September 1981. I received my Bachelor's degree from the University of Rome "Roma Tre" in Biological Sciences and my Master's Degree in Neurobiology from the University "La Sapienza" in Rome as well. From October 2007 I worked at the EBRI ("European Brain Research Institute") in the laboratory of Dr. Helene Marie. The aim of my work was developing a viral tool to recognize CREB activation in adapting neurons. In September 2009 I joined the group of Dr. Ibanez-Tallon. The main aim of my project is the production of viral vectors and transgenic mice carrying membrane tethered toxins genes. I will use them to silence and study specific neuronal networks with the main focus on the central pain pathway. I'm interested in electrophysiology and behavior. I like music, movies, football and cooking.

Nadine Strempel

I will be involved in a project at Frauke Zipp's lab at the MDC, working on dendritic cells and their role in multiple sclerosis. Born in Rochlitz, close to Leipzig, Germany, I started my studies 2001 in Kiel, changing the university in 2004 to continue my education in Heidelberg. The research for my Diplom involved studies of herpes simplex viruses and was performed at the German Cancer Research Center in Heidelberg. During my studies, I got the opportunity to go to Kopenhagen, Denmark, for a six month internship at the Royal Veterinary and Agricultural University. Currently I am working in a biotechnology company in Leipzig as a research assistant. Apart from that, I'm interested in diving, skiing, cycling, music and fashion.

Sudhir Gopal Tattikota

I'm Sudhir and I joined Matthew Poy's group in August this year. I have started my PhD work on the "Molecular mechanisms that govern the survival of pancreatic beta cells in mice". I was born in the historic city of Hyderabad in India. I obtained my Bachelors in Genetics & Chemistry from Osmania University and my Masters in Molecular Biology from the University of Madras, Chennai. I was a research assistant at the Institute of Bioinformatics, Bangalore, where I worked on the development of a tool called PhosphoMotif Finder, published in Nature Biotechnology in 2007. I later moved on to work on the Biology of human Mesenchymal Stem Cells at the Centre for Cellular and Molecular Biology (CCMB) in my hometown Hyderabad before joining MDC. I have a great passion for science and I love food, classic rock and chocolates (I sometimes wake up at 3 in the morning to have some ;-).

Thomas Zielke

I was born in Berlin an I completed my studies of Biology at the Humboldt-Universität zu Berlin with the specialization in the fields of Microbiology, Biochemistry and Genetics. Now I´ll start my PhD in the cytogenetics group of Prof. Saumweber, where I´ve already done my Diplom thesis and where I´ve collected a lot of positive impressions and experiences. This group focuses on epigenetics questions using *Drosophila melanogaster* as a model organism. In this connection the intention of my work will be to elucidate the mechanisms of banding pattern formation in polytene chromosomes.

PhD Award Ceremony

An Award Ceremony for students who have finished the PhD training at the Helmholtz Graduate School took place in connection with the Opening Event for the Introduction Weeks on Monday the 5th October. We would like to congratulate **Chen Chen, Sridhar Chirasani, Miao Gan, Dana Kikic** and **Vedrana Tabor** on successfully defending their PhD thesis and obtaining the doctor title!

Chen Chen at the award ceremony

Introduction Weeks / Ida Vase

During the first two October Weeks the Graduate School held Introduction Weeks for new PhD students, the purpose of which is to present the MDC facilities and make new students more familiar with the campus. Facility-courses included the presentation of model organisms, an introduction to the proteomics platform, mass spectrometry and electron microscopy. The Biotools series covered among other areas DNA-tools, protein sequence search and analysis tools. These weeks were also the starting shot for the TransCard, MolNeuro and PhD Lecture Series.

The scientific courses were supplemented by soft skills courses, e.g. on "how to publish a paper" presented by Mr Arthur Eger from Elsevier. Social events included a visit to the Reichstag on the 10th October by a group of about 15 students, where we got a guided tour and learned about the history, architecture and art of the German parliamentary buildings, concluding with a sunny visit to the Reichstag dome offering a great view of Berlin.

The Introduction Weeks were rounded off by an "International Dinner meets the weekly Beer Hour", where every student brought a traditional dish from their home country to create a potluck dinner. The event was attended by numerous colleagues, and we hear the party continued downtown!

Please note: the **university winter semester has started as of the 12th October** and as usual the universities offer a range of language-, soft skills and sports courses. Have a look at the websites or ask the graduate administrators (FU: natalya.hermann@mdc-berlin.de; HU: ida.vase@mdc-berlin.de). But hurry up - the courses fill up quickly!

ONE DAY IN...

... AG DAUMKE

What the hell are crystallographers for? / CF

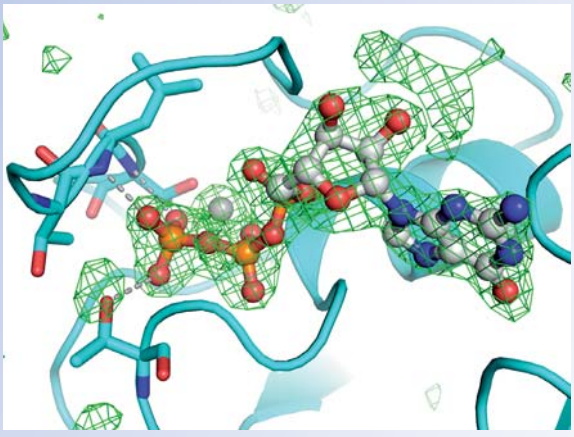
Crystallographers are a small but growing community comprising scientists of all fields, not only life sciences. There are two crystallography groups at the MDC at the moment: the group of Prof. Udo Heinemann and the relatively new group of Dr. Oliver Daumke. Both labs are located in house 31.2.
In Oli's lab there are actually 7 PhD Students, one Post-Doc, two Technicians and one trainee trying to solve what crystallographers call the phase problem. But let's start from the beginning. Oli established the Helmholtz University Junior Group "Structure and Mechanism of Nucleotide-Binding Proteins" at the MDC in June 2007. Having started with only one PhD student, Oli's group now has reached the critical mass needed for publishing a nature paper a week.

The group's main focus, as one easily can derive by its official title, lies on structure determination of proteins. A protein structure is an amazing revelation of beauty, but like all revelations is not that easily obtainable. Besides being extremly elegant, structures, if solved to a sufficient resolution, tell us more than just the relative positions of atoms in 3D space. Molecular models (a crystallographer does not talk about molecules but models of molecules, in which the structures and interactions are depicted, not shown) obtained from crystallography are widely used as tools for revealing molecular details of life processes. Scientists use these models to learn how molecules "work": how enzymes catalyze metabolic reactions, how transport proteins load and unload their cargo, how antibodies bind and lead to the destruction foreign substances, and how proteins bind to DNA, turning genes on and off.

So what do we do all day long? Look at models of molecules and analyze their details? Yes and no. Before we can start with the computer work, we have to do lots of wet lab work. Purifying the protein of interest is the very first step. Once the protein's cDNA is cloned in a suitable vector and the expression system of choice is transformed with the vector, we can go on producing our protein of interest recombinantly. If the protein is soluble we then try to purify it via affinity chromatography. We work mostly with His- or GST-tagged constructs. After three days of hard work and if everything went fine we finally obtain a pure protein solution. So far, so good. Now the most thrilling part of our work starts, the quest for the best crystallization conditions.
Under certain circumstances, many molecular substances, including proteins, solidify to form crystals. Under "certain" circumstances I mean that nobody knows if a protein or a certain construct is crystallizable at all. There are proteins that behave nicely, for example they are soluble to a concentration of up to 150 mg·ml-1 and easy to purify but some (or to be honest most of them) do not form any crystals under any of the thousands of conditions we try, meaning the end of the project.

But why do we need these fancy crystals again? To answer this question one has to recall some basics of physics. When we see an object, light rays bounce off (are diffracted by) the object and enter the eye through the lens, which reconstructs an image of the object and focuses it on the retina. In order for the object to diffract light and thus be visible, the wavelength (lambda) of the light must be, roughly speaking, no larger than the object. Visible light, which is electromagnetic radiation with wavelengths of 400 – 700 nm, cannot produce an image of individual atoms in protein molecules, in which bonded atoms are only about 0.15 nm or 1.5 angstroms apart. Electromagnetic radiation of this wavelength falls into the X-ray range and X-rays are diffracted by even the smallest molecules. Because a single molecule is a very weak scatterer of X-rays, most of the X-rays will pass through a single molecule without being diffracted, so the diffracted beams are too weak to be detected. Analyzing diffraction from crystals, rather than individual molecules, solves this problem. And that's why we absolutely have to obtain crystals in the end! A crystal of a protein contains many ordered molecules in identical orientations, so each molecule diffracts identically, and the diffracted beams for all molecules augment each other to produce strong, detectable X-ray beams. Because X-rays cannot be focused by lenses, crystallographers measure the directions and intensities of the diffracted X-rays with super sensitive detectors and then use a computer to simulate an image-reconstructing lens. Finally we obtain an image of the electron clouds that surround the molecules in the average unit cell in the crystal. And with this image we are able to locate all atoms in the unit cell, giving such nice structures as you can see below.

In the Daumke group, we are interested in understanding how G proteins work on a molecular level. These proteins are involved in a variety of cellular processes and their tight mechanistic regulation makes it crucial to understand in a detailed way how they work. A project in our lab focuses on the mechanisms of membrane remodelling by large G proteins of the dynamin superfamily, in particular EHD proteins. The models we obtain from different conformations of the protein help us understand its mechanism of action, such as the stoichiometry of protein complexes, the substrate affinity and the conformational changes that regulate its function. Once we acquire enough information, we can design small molecule inhibitors that can be used to identify and inhibit the cellular pathways in which these proteins are involved. This information will contribute to our knowledge on the general principles of cell biological processes such as membrane remodelling. And it is all thanks to crystals.



Model of the binding pocket of a GTP-binding protein. The interaction of 3 residues with the GTP molecule (electron density shown) has been modeled. (Courtesy of David Schwefel)

BERLIN HOTSPOTS

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Gleimstraße / Schwedter Straße
10437 Berlin

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what to pay at the end of the evening)
Fehrbelliner Str. 57
10119 Berlin
Tel.: 030 440 69 83

Onkel Ho
Vietnamese cuisine (good for pho fans)
Gleimstraße 13
10437 Berlin
Tel: 030 437 35 761

Teufelsberg
A perfect dating place and
suitable for kite running
Teufelsseechaussee
14193 Berlin

Rocco und seine Brüder
Italian cuisine
Lausitzer Platz 13
10997 Berlin
Tel: 030 695 66 939

Salon zur Wilden Renate
Club (perhaps the next CheckUp there ...?)
Alt Stralau 70
10245 Berlin
salonzurwildenrenate.de

Max-Liebermann Haus
Exhibition "Szenen und Spuren eines Falls"
(on the fall of the Wall, until December 6th)
Pariser Platz 7
10117 Berlin
Tel.: 030 226 33 00
brandenburgertor.de

Hubertus Lounge
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What are your ideas for the PhD Newsletter?
What would you like to see on maX?
What would you like people on campus to know?

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We want to include your voice in maX!

Write to us at maXmoeglich@mdc-berlin.de

"Piled Higher and Deeper" by Jorge Cham; www.phdcomics.com

6th International Ph.D. Symposium

Berlin Brain Days

2009/*dec.* 9–11

0 Opening lecture
Jörg Geiger
Institute of Neurophysiology, Charité – Universitätsmedizin Berlin

1 Keynote lecture
Cellular and Molecular Control of Axolotl Spinal Cord Regeneration
Elly Tanaka,
Center for Regenerative Therapies, TU Dresden

2 Keynote lecture
Feedback of Visual Object Information to Foveal Retinotopic Cortex
Nancy Kanwisher
MIT, McGovern Institute for Brain Research

3 Keynote lecture
Single Cell Driven GABAergic Volume Transmission in Cortical Circuits
Gábor Tamás
University of Szeged, Research Group for Cortical Microcircuits

4 Keynote lecture
Microglia and Huntington's Disease
Thomas Möller
University of Washington, Dept. of Neurology, Seattle

5 Keynote lecture
Regulation of Cerebral Blood Flow: A Story of Increasing Complexity
Wolfgang Kuschinsky
University of Heidelberg, Institute of Physiology & Pathophysiology

6 Keynote lecture
Colour, Motion, and Natural Vision in the Human Brain
Andreas Bartels
Max Planck Institute for Biological Cybernetics, Tübingen

9–11 December 2009
Max Delbrück Center for Molecular Medicine Berlin-Buch

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DFG-Graduiertenkolleg 1258

Graduate Training Program "Cellular Mechanisms of Learning and Memory Consolidation in the Hippocampal Formation"
DFG-Graduiertenkolleg 1123

Berlin School of Mind and Brain

Humboldt-Universität zu Berlin