



# ZIHP *News*

Zurich Center for Integrative Human Physiology

7/8-2012 • July/August 2012

## Science at the movie theater: The imMed retreat 2012

Jenny Kürth

A Monday morning in Zurich like any other? Not quite! In front of platform 10 at Zurich main station you might have noticed a group of barely awake students, coffee in hand, who met for the 7<sup>th</sup> annual retreat of the imMed PhD Program. Our destination this year: The beautiful medieval town of Stein am Rhein in the Northeast of Switzerland. At the in-house movie theater of the family-run backpacker «Hotel Schwanen» we were welcomed by the commission of the imMed PhD Program.

### **Broad variety of topics**

On this day's program our fellow PhD students presented exciting research stories: Andreas Metz talked about tissue oxygenation during sleep, and Rahel Siblingler showed us the protective effect of high density lipoprotein on pancreatic  $\beta$ -cells. After that, Kessara Chan caught our attention with his presentation on the characterization of a SNAT3 deficient mouse. The morning session was rounded off by the presentation of Federica Storti on oxygen-regulated expression of EPO in cellular models and Jeremy Deuel on the mechanism of renal hemoglobin toxicity.



After a long and hot morning we definitely needed a recharge of our batteries: Sandwiches and a lot of healthy fruit and vegetables were served for lunch at the foyer of the cinema. There, we had the opportunity to discuss our fellow students' posters. After spending the rest of the lunch break either visiting the charming town center with its beautifully restored houses and magnificent frescoes or in the cool breeze at the shore of the Rhine, we were ready to follow the afternoon session with a broad variety of topics. Yang Liu talked about treatment possibilities for autosomal dominant polycystic kidney disease (ADPKD). Jadwiga Oczos explained how paraoxonase-1 is involved in retinal physiology. And she warned us:

“Stop smoking, it damages your eyes.” Nikunj Shah talked about risk-factors for rheumatoid arthritis by reassuring us: “Stop smoking, but keep drinking!” Chien-Cheng Chen concluded the afternoon presentation session with his talk on disease modeling of the infantile nystagmus syndrome.

### **Swiss pastry for international students**

After some delicious homemade cake we went back to the movie theater one last time that day for various information on the imMed PhD Program. Before dinner, some of the students headed for the «Badi» nearby, for a swim or some sports. At the aperitif at the Rhine we got an entertaining introduction from Stavroula and

Jerry about their home countries Greece and Indonesia. At the historic Bürgerasyl we had a splendid dinner with a typical Swiss pastry for dessert, the Cremeschnitte. The majority of the group moved on to a pub to watch the last group games of this year's European Football Championship. The Italian students among us could relax!

On the second day the matinée at the Schwanen movie theater started with a presentation about the activities of the Graduate Campus of the UZH by its Deputy Managing Director, Vivien Kappel. Then Pamela Alean-Kirkpatrick showed us how to give a good scientific presentation. Now we all know what to focus on while preparing and giving a presentation.

**Beach volley ball or a walk to Paradise**

After that, we took the boat to Diesenhofen where we had a BBQ lunch

at the "Rhybadi" before our group split up for the final activities of our two day trip: Some of us joined Heidi for a nice long walk along the Rhine to Paradise (yes, that was the real name of the village) near Schaffhausen while others took the motto of the second day of the retreat – networking – literally and played a couple of tough international games of beach volley ball at the Rhine.

We really enjoyed those two days and the opportunity to get to know our fellow imMed students from the various institutes as well as their projects. Our thanks go to Heidi who was the main organizer and travel guide. We are looking forward to the next retreat!

→ [photo album of the retreat](#)



**Open PhD positions**

→ The role of sialylated glycan structures in mucosal immunity  
Institute of Physiology, UZH

→ Transport of High Density Lipoproteins (HDL) through the endothelium  
Institute of Clinical Chemistry, USZ

→ Physiological effects of Roux-en-Y gastric bypass (RYGB) surgery in females  
Institute of Veterinary Physiology, UZH

→ K39 and R41 cleaved protease activated receptor 3 as a future target for inflammatory disease  
Intensive Care Unit, USZ

→ Inhibition of renal sodium-glucose cotransport to prevent progression of polycystic kidney disease  
Institute of Physiology, UZH

→ Obesity-associated insulin resistance and diabetes  
Paediatric Endocrinology, University Children's Hospital Zurich

→ The role of genetic rearrangement of RAS in cancer  
Department of Oncology, USZ

→ Function of oxygen-regulated globins in chronic kidney disease  
Institute of Physiology, UZH

→ Glutamatergic mechanisms in sleep-wake homeostasis – molecular brain imaging and pharmacogenetics  
Inst. of Pharmacology & Toxicology, UZH

→ Intraoperative detection of epileptiform patterns in the iEEG of neurosurgical patients  
Division of Neurosurgery, USZ

→ Mechanism and regulation of amino acid (re)absorption  
Institute of Physiology, UZH

→ Upper limb activity monitoring in the rehabilitation of human SCI  
Spinal Cord Injury Centre, Balgrist University Hospital

**New imMed seminar series «Vision 2020»**

The SUK Doktoratsprogramme of the Graduate Campus UZH chose to support the proposal «Vision 2020 - a personal perspective» of the imMed PhD Program. Prominent speakers, national and international, will share their «Vision 2020» on multidisciplinary topics of general interest through different perspectives, such as economic, ethical and social facets in this new series. Congratulations! The series will be organized by a committee of imMed PhD students.

## 8<sup>th</sup> ZIHP Symposium on August 24, 2012

The spacious foyer at the Händeliweg again opens its doors for an exciting day of science where basic researchers and clinical scientists get together to present and discuss their research in fields related to human physiology. In particular, young researchers will have the opportunity to present their cutting-edge results in oral and poster presentations. Notably, a large part of the presentations is given by students of the → [imMed PhD Program](#) and originates from ZIHP funded → [cooperative projects](#).

We are very proud to announce our four keynote speakers: → [Prof. Derk-Jan Dijk](#) (University of Surrey, UK), sleep research expert and a new member of the Scientific Advisory Board of the ZIHP, → [Prof. Bart Staels](#)

(University of Lille, France), a leading researcher in cardiovascular disease, diabetes and lipid disorders, → [Prof. Michael N. Hall](#) (University of Basel, Switzerland), who is famous for his pioneering work about basic mechanisms of cell growth, and → [Prof. Josef T. Prchal](#) (University of Utah, USA), a prominent hematologist, who will tell us about Tibetans adaption to high altitude. We are very happy that they all accepted our invitation to present their exciting research during special lectures at the ZIHP Symposium.

Don't miss the opportunity for an intensive scientific exchange in a relaxed atmosphere!

Deadline for → [registration](#): Friday, August 10, 2012

## Die Kindheit wirkt nach



Die Erfahrungen in der Kindheit beeinflussen die körperliche und psychische Gesundheit im Erwachsenenalter. So sind selbstbeherrschte Kinder als Erwachsene erfolgreicher, gesünder und glücklicher. Umgekehrt erhöhen Kindsmishandlungen unter anderem das Ri-

siko für einen Herzinfarkt im späteren Leben. Dies ist das Fazit einer Veranstaltung des ZIHP zusammen mit der Klaus-Grawe-Foundation.

→ [Lesen Sie den Artikel auf UZH News.](#)

## Events

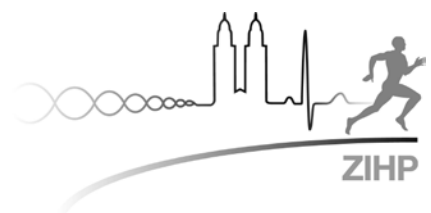
- August 21–25, 2012  
→ [26th Conference of European Comparative Endocrinologists \(CECE\) 2012](#)  
University of Zurich, Irchel Campus
- 23./24. August 2012  
→ [Rheuma Top 2012](#)  
Seedamm Plaza, Pfäffikon
- 30. August 2012  
→ [Prevention Summit](#)  
University Hospital Zurich
- Juli–August 2012  
→ [Neurologie-Fortbildung](#)
- September 12, 2012  
→ [Progress report angiogenesis research](#)  
Rok Humar, Department of Internal Medicine, USZ

## New ZIHP website

In parallel to this newsletter, the → [ZIHP website](#) appears now in the Corporate Design of the University of Zurich. Among other things, a → [german frontpage](#) was added.

## Activity Report 2011

The → [Activity Report 2011](#) of the University Research Priority Program Integrative Human Physiology can now be downloaded from the ZIHP website.



## Press review

### → Wie metastasierende Krebszellen in Organe eindringen

Nicht Primärtumore, sondern deren Metastasen sind für die Mehrzahl der Krebstoten verantwortlich. Physiologen und Neuropathologen um die ZIHP-Mitglieder Lubor Borsig, Mathias Heikenwälder und Achim Weber identifizieren jetzt den Anfang der Metastasenbildung. Sie können als Erste den Weg von metastasierenden Darmkrebszellen aus den Blutbahnen nachweisen.

Medienmitteilung der UZH, 11. Juli 2012

### → Der westliche Lebensstil beeinflusst auch den Darm

Chronische entzündliche Darmkrankheiten, zu denen die zwei Hauptvertreter Morbus Crohn und Colitis ulcerosa zählen, werden immer häufiger. Über Entstehung, Symptome und Behandlung berichtete ZIHP-Mitglied Gerhard Rogler am Falk Symposium 2012.

Medical Tribune, 29. Juni 2012

### → Auf der Suche nach der perfekten Genfährde

Die Immunologin, Kinderärztin und ZIHP-Forscherin Janine Reichenbach arbeitet mit der Unterstützung der Gebert Rüt Stiftung an der Verbesserung der Therapie der Septische Granulomatose (CGD). Reichenbach will die perfekte Genfährde konstruieren, die erlaubt, gesunde Gene in die Zellen zu schleusen und so die seltene Krankheit ohne Nebenwirkungen zu heilen.

UZH News, 27. Juni 2012

### → In Labors wird am Übermenschen getüftelt

Die Suche nach Schlüssel-Genen für sportliche Leistungen hat auch eine Kehrseite: Was, wenn man diese Gene manipulieren kann? Die Grundlagen dafür sind längst vorhanden. Am Tierspital in Zürich hat ZIHP-Mitglied Max Gassmann transgene Mäuse konstruiert, deren EPO-Regulation manipuliert ist. Sie sind überragende Dauerläufer.

NZZ am Sonntag, 24. Juni 2012

### → Venen-Ersatz aus den eigenen Stammzellen

Ärzte haben einem Kind eine Vene transplantiert, die sie aus Stammzellen züchteten. Dieses und weitere Beispiele zeigen, dass Tissue-Engineering im Blutkreislauf funktioniert. ZIHP-Mitglied Simon Hoerstrup züchtet Blutgefässe und Herzklappen im Labor, die er noch in diesem Jahr im Rahmen einer Pilotstudie bei Kindern einsetzen will.

Neue Zürcher Zeitung, 20. Juni 2012

### → Kinder, die anecken

Ist ein Kind nur impulsiv oder bereits krank? Bis heute gibt es keinen eindeutigen Test, der genau feststellen kann, ob eine Aufmerksamkeitsstörung (ADHS) vorliegt. Der Umgang von Ärzten und Therapeuten mit dieser Unsicherheit war Thema einer Tagung an der UZH, die von der Abteilung Entwicklungspädiatrie des Kinderspitals Zürich unter der Leitung von ZIHP-Mitglied Oscar Jenni organisiert wurde.

UZH News, 20. Juni 2012

### → Siegeszug der Bildgebung

Im kommenden Jahr läuft der Nationale Forschungsschwerpunkt «Neuro» aus. Eine Veranstaltung von Universität Zürich und ETH Zürich zog Bilanz und warf einen Blick in die Zukunft der Hirnforschung. Insbesondere die bildgebenden Verfahren werden die Prävention, Diagnose und Therapie von Hirnkrankheiten verbessern helfen, so das Fazit der Forscher, unter ihnen auch mehrere ZIHP-Mitglieder.

UZH News, 19. Juni 2012

### → «Wir lassen uns nicht bluffen»

Am «Tag der Forschung» am Mittwoch war der Schweizerische Nationalfonds zu Gast an der UZH. Im Lichthof wurden die verschiedenen Förderungsmöglichkeiten für Forschende vorgestellt, und ein Podiumsgespräch mit fünf Forschungsräten – unter ihnen ZIHP-Mitglied François Verrey – erhellte, wie Gesuche beurteilt werden.

UZH News, 15. Juni 2012

### → Zwischen Gerinnung und Blutung – neue Therapien gegen Infarkt, Hirnschlag und Embolie

Das Leben ist voller Gefahren: Für Odysseus, den antiken Seefahrer, war es die Meerenge zu Messina. Für den modernen Arzt sind es Gerinnung und Blutung, die es zu vermeiden gilt, denn beide sind vergleichbar gefährlich für den Patienten, sagt ZIHP-Mitglied Thomas Lüscher.

Mediaplanet, 14. Juni 2012

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