



ZIHP News

Zurich Center for Integrative Human Physiology

03-2014 • March 2014

Aging research: promises and realities

Jerry Hartanto Fuady

Year after year we're aging and it seems like there is nothing we can do about it. Why do we age? Is there a way to stop it? Aging is a topic of great interest because of the aging society and its association with numerous diseases, including cancer and Alzheimer's disease. In → last semesters seminars of Vision 2020 five renowned speakers from science and industry presented their research in aging.

The first speaker of the Vision 2020 series, Yves Barral from the Institute of Biochemistry, ETH Zurich, showed that, if the so-called «aging factors» are prevented from passing into daughter cells in the process of cell-division during aging in yeast, this results in younger daughter cells. This is a first approach to slow the process of aging.

The second speaker was Stephen. J. Matlin, the CEO of Life Length, a company that aims to define aging by developing the Telomere Analysis Technology (TAT). This technology allows scientists to accurately measure the percentage of critically short telomeres individually cell-by-cell with the goal to compare the biologi-

cal age with the chronological age of an individual.

The fans of dieting were looking forward to the presentation of Jamie Barger, the COO of LifeGen Technologies. LifeGen investigates how to slow down the process of aging by caloric restriction. Barger showed that for example Resveratrol, a component of red wine, has the potential to induce expression of genes known to be associated with anti-aging properties.

The next speaker, Raul Mostoslavsky from Harvard Medical School, presented hints for an interplay between aging and cancer. He investigates this in sirtuins, a family of enzymes important in glucose metabolism. Overexpression of one of these sirtuins in mice has been shown to prolong their lifespan, however interestingly knockout of the same gene in mice has been shown to reduce the aggressiveness of cancer cells by reducing metastasis.

Last but not least, Adam Antebi from the Max Planck Institute for Biology of Ageing in Cologne, Germany, pre-



sented his work in protein quality control systems. He showed that by stressing a site for protein quality control in the cells of *C. elegans*, a worm frequently used as model organism, mutants developed which show prolonged life span. Therefore he believes that the maintenance of protein quality control systems is essential for the aging processes.

With the advent of the aging society, understanding the process of aging becomes more and more important. From these five speakers, we have had a glimpse of how far we have come in understanding aging up to now and how much more we still have to learn.

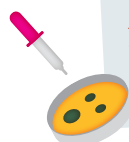
—
Jerry Hartanto Fuady is a member of the organizing team of Vision 2020.

The series is organized by a committee of PhD students of the → **PhD Program in Integrative Molecular Medicine (imMed)** and supported by the SUK Program «Doktoratsprogramm».



**VISION 2020 - A PERSONAL PERSPECTIVE
REGENERATIVE MEDICINE**

Spring semester 2014 - detailed program to be announced.



imMed PhD Program: Retreat 2014

The → 9th retreat of the PhD Program in Integrative Molecular Medicine on June 11/12, 2014 will take the PhD students to Magglingen, high above the Lake of Biel, to the Swiss Federal Sports College where Swiss top athletes as well as schools and hobby sports clubs hold training camps.

As usual some of the imMed PhD students will present their projects in talks or on posters on the first day. In the evening a barbecue in the Jura forest will get the participants in the right mood for the team sports events of the second day.

imMed PhD Program: Finished PhD theses 2013

Abegg K (2013): Effects of Roux-en-Y Gastric Bypass Surgery on Energy Expenditure and Bone Metabolism in Rats. Institute of Veterinary Physiology, UZH

Bounoure L (2013): The role of the ammonia transporter RhCG in systemic acid-base homeostasis. Institute of Physiology, UZH

Caprara C (2013): Role of Hypoxia-inducible Factor 1A and Erythropoietin in Retinal Physiology and Development. Lab for Retinal Cell Biology, Department of Ophthalmology, USZ

Egger S (2013): → Functional implications of the regulation of PASKIN mRNA. Institute of Physiology, UZH

Ernst D (2013): → Regulation of deoxy-sphingolipids and their role in disease. Institute of Clinical Chemistry, USZ

Herová M (2013): → Role of ChemR23 signaling in inflammation. Division of Clinical Chemistry and Biochemistry, University Children's Hospital Zurich

Holst S (2013): → Glutamatergic and Dopaminergic Mechanisms of Sleep-Wake Regulation in Healthy Humans. Institute of Pharmacology and Toxicology, UZH

Jacobs R (2013): → Analysis of mitochondrial function in mouse and men. Institute of Veterinary Physiology, UZH

Jordi J (2013): → Individual amino acids - hungry brain and mobile gut. Institute of Physiology, UZH

Metz A (2013): → Cerebral oxygen metabolism in sleep measured with near-infrared spectroscopy. Division of Neonatology, USZ

Patti M (2013): → Structure-function studies on a sodium-coupled phosphate cotransporter. Institute of Physiology, UZH

Riwanto M (2013): High Density Lipoprotein from Patients with Coronary Disease Exerts Altered Endothelial Effects: Role of Proteome Remodeling. Institute of Physiology, UZH

Robert J (2013): → Trans-Endothelial transport of high density lipoproteins in inflammation and 3D engineered artery to study atherosclerosis. Institute of Clinical Chemistry, USZ

Shah N (2013): → Role of Mimivirus Collagen in Rheumatoid Arthritis. Institute of Physiology, UZH

Stadelmann K (2013): → Alterations in the sleep EEG at moderate altitude. Institute of Pharmacology and Toxicology, UZH

imMed PhD Program Graduate courses

June 4/5, 2014

→ Introduction to human physiology: Cardiovascular regulation

Registration deadline: May 16, 2014

June 16/17, 2014

→ Introduction to human physiology: Sensory systems : How we hear and see

Registration deadline: May 23, 2014

July 10/11, 2014

→ Mouse physiology and pathophysiology

Registration deadline: June 27, 2014

Sluka S (2013): Tissue Factor in Development and Hemostasis: Role of Alternative Splicing Isoform and Allosteric Disulfide Bond. Clinic for Cardiology, USZ and Institute of Physiology, UZH

Trompf K (2013): → Regulation of Kidney Distal Convoluted Tubule (DCT) Cell Function. Institute of Anatomy, UZH

Weiss A (2013): → Protective action of maternal milk in gastrointestinal physiology. Institute of Physiology, UZH

Welti M (2013): → Congenital and Ethanol-induced Disorders of N-linked Protein Glycosylation. Institute of Physiology, UZH

imMed PhD Program: New students

Since the last recruitment round 14 new PhD students who were accepted to the PhD Program in Integrative Molecular Medicine (imMed) started their work here in Zurich. Welcome!

Cantó Martorell Belén, Institute of Veterinary Physiology, UZH

Gottwald Esther, Institute of Anatomy, UZH

Haider Thomas, Institute of Veterinary Physiology, UZH

Hauerding Veronika, Division of Rheumatology, USZ

Kehl Debora, Division of Cardiovascular Surgery Research, USZ

Lang Christopher, Tissue Biology Research Unit, University Children's Hospital

Mondal Mrityunjoy, Division of Psychiatry Research, UZH

Müller Melanie, Division of Cardiovascular Surgery Research, USZ

Oparijta Lalita, Institute of Physiology, UZH

Pachera Elena, Division of Rheumatology, USZ

Restin Tanja, Institute of Physiology, UZH

Ruoss Severin, Orthopaedic Research, Balgrist University Hospital

Schori Christian, Division of Ophthalmology, USZ

Zimoch Jakob, Tissue Biology Research Unit, University Children's Hospital

«Meh Dräck»



Allergien werden immer häufiger. Was sich tun lässt, damit sie nicht zur Epidemie der Zukunft werden, hat Georg Schächli, Geschäftsleiter des Allergiezentrum Schweiz (aha!), im Rahmen der ZIHP-Veranstaltungsreihe «Wissen-schaf(f)t Wissen» erläutert.

→ [Zum UZH News-Artikel](#)

Events

March 17, 2014

→ [Caloric restriction and atherothrombosis – a role for sirtuins?](#)

PD Dr. Christian Matter, Institute of Physiology, UZH

March 17, 2014 - Antrittsvorlesung

→ [Common molecular pathways involved in aging, and age-dependent vascular dysfunction](#)

PD Dr. Giovanni Camici, Center for Molecular Cardiology, UZH

March 18, 2014

→ [New methods for a functional and anatomical map of the mouse kidney](#)

Dr. Anastasios Marmaras, Institute of Physiology, UZH

20. März 2014

→ [5. Zürcher Adipositasymposium](#)

20. März 2014

→ [9. Symposium Demenz und Neurodegeneration](#)

March 24, 2014

→ [Deoxysphingolipids, a novel biomarker for type 2 diabetes, are cytotoxic for insulin-producing cells](#)

Dr. Richard Züllig, Clinic for Endocrinology, USZ

March 24, 2014 - Antrittsvorlesung

→ [Stem cells and bone loss: what's the link?](#)

PD Dr. Peter J. Richards, Center for Applied Biotechnology & Molecular Medicine, UZH

WISSEN-SCHAFFT WISSEN

Nächste Veranstaltungen

7. April 2014

→ [Sichere Lebensmittel: Vom Stall bis auf den Teller](#)

Prof. Roger Stephan, Direktor des Instituts für Lebensmittelsicherheit und -hygiene der Universität Zürich

5. Mai 2014

→ [Krank werden im Spital: ein paradoxes Risiko](#)

PD Dr. Hugo Sax, Leiter der Abteilung für Spitalhygiene am Universitätsspital Zürich

March 25, 2014 - ZIHP Lunch Seminar

→ [Does altitude training improve sea level exercise performance?](#)

Prof. Dr. Carsten Lundby, Institute of Physiology, UZH

March 28, 2014 - ZIHP Special Seminar

→ [The squeaky transporter gets the grease: the role of PIP2 on serotonin transporter function](#)

Prof. Dr. Harald H. Sitte, Center of Physiology and Pharmacology, Institute of Pharmacology, Medical University of Vienna, Austria

April 1, 2014

→ [Regulation of the Epo gene](#)

Dr. Sara Santambrogio, Institute of Physiology, UZH

3. April 2014

→ [14. Zürcher Schlafmedizin-Symposium](#)

3. April 2014 - Reihe «Tierisch! Das Tier und die Wissenschaft»

→ [Tiere gebrauchen - mit Tieren forschen](#)
Moderation: Prof. Dr. Thomas Lutz, Institut für Veterinärphysiologie, UZH

April 7, 2014

→ [Identification and isolation of stem cell populations for bone regeneration](#)

PD Dr. Paolo Cinelli, Trauma Surgery, USZ

Call for applications: ZIHP Award

The Zurich Center for Integrative Human Physiology calls for applications for the → [ZIHP Award](#). With this award, outstanding single publications that evolved from ZIHP-funded cooperative projects will be honored.

Apart from the scientific excellence in the field of human physiology, the balanced representation of basic and clinical research and the «added value» of the cooperative research approach will be evaluated.

Application deadline: April 28, 2014

→ [Information and application form](#)

April, 7, 2014

→ [Grainyhead transcription factors in collecting duct morphogenesis and differentiation](#)

Prof. Kai M. Schmidt-Ott, Max Delbrück Center for Molecular Medicine, Berlin

April 8, 2014

→ [Nephrology at the half-century mark: much progress but miles to go before we sleep](#)

April 9, 2014

→ [Fetal origins of hypertension and kidney disease](#)

Prof. Dr. Barry M. Brenner, Harvard Medical School, Boston, MA, USA

April 8, 2014 - ZIHP Lunch Seminar

→ [Blood pressure genomics - how to make use of new methods to investigate cardiovascular risk](#)

Dr. Georg B. Ehret, Cardiology, Geneva University Hospitals, Geneva

April 14, 2014

→ [Clinical presentation and treatment options in primary neurotransmitter deficiencies](#)

PD Dr. Thomas Opladen, Metabolic Laboratory University Hospital of Heidelberg

May 19/20, 2014

→ [Psychiatry under the lens of algorithms: First Zurich Computational Psychiatry Meeting](#)

Registration and abstract submission deadline is March 30, 2014.

Press review

→ Stents, die sich in Wohlgefallen auflösen

1977 gelang es in Zürich zum ersten Mal, ein Gefäß am Herzen per Ballonkatheter zu öffnen. Seither jagen sich die Innovationen - vom Metall-Stent über den medikamentenbeschichteten Stent, und jetzt neu: zum sich selbst abbauenden Stent. ZIHP-Forscher Thomas Lüscher nimmt Stellung.

Puls, Schweizer Radio und Fernsehen, 3. März 2014

→ Schlafforschung unter einem Dach vereint

Die Universität Zürich stärkt die Schlafforschung in Zürich, um sich im internationalen Wettbewerb besser zu positionieren. 15 Forschungsgruppen - unter ihnen einige ZIHP-Mitglieder - sind im neu gegründeten universitären Kompetenzzentrum für interdisziplinäre Schlafforschung vereint.

Medienmitteilung der UZH, 27. Februar 2014

→ Mikrobiologisches Pompeji im Zahnstein

Forscher des Zentrums für Evolutionsäre Medizin der Universität Zürich um ZIHP-Mitglied Frank Rühli und Fachkollegen entdeckten im Zahnstein von eintausend Jahre alten Skeletten ein «mikrobiologisches Pompeji». Sie fanden eine hohe Konzentration von Erbsubstanz und zahlreiche Krankheitserreger. Dabei stellte sich heraus, dass im Mittelalter Parodontitis wohl von den gleichen Erregern wie heute verursacht wurde.

Medienmitteilung der UZH, 23. Februar 2014

→ «Lenins Hirn war ruiniert»

Die Grenzen unserer Intelligenz legen die Gene fest. Was wir daraus machen, hängt von uns, der Erziehung und von der Schule ab. Da liegt noch Potenzial brach, sagt ZIHP-Forscher Martin Meyer.

magazin. Die Zeitschrift der Universität Zürich, 20. Februar 2014

10th ZIHP Symposium August 29, 2014

Basic researchers and clinical scientists will get together to present and discuss their research in fields related to human physiology. Young researchers will present their cutting-edge results in oral and poster presentations. The ceremony of the → **ZIHP Award** will take place at the symposium.

Keynote speakers:

→ **Prof. Friedo Dekker**

Department of Clinical Epidemiology, Leiden University Medical Center, Netherlands

→ **Prof. Heribert Schunkert**

German Heart Center, Munich, Germany

→ **Prof. Bengt Kayser**

Institute of Sports Sciences, University of Lausanne, Switzerland

→ **Website of the symposium**

Save the date! The submission of abstracts for oral presentations and posters is already possible.

Recent publications

Recent publications of ZIHP members mentioning the ZIHP in the affiliation section or acknowledging the financial support of the University Research Priority Program «Integrative Human Physiology» are listed here.

Adrian A, Schoppmann K, Sromicki J, Brungs S, von der Wiesche M, Hock B, Kolanus W, Hemmersbach R, Ullrich O: → **The oxidative burst reaction in mammalian cells depends on gravity**. Cell Commun Signa 11: 98, 2013

Albers J, Rajski M, Schönenberger D, Harlander S, Schraml S, von Teichman A, Georgiev S, Wild PJ, Moch H, Krek W and Frew IJ: → **Combined mutation of Vhl and Trp53 causes renal cysts and tumours in mice**. EMBO Mol Med 5: 949-64, 2013

Albrecht B, Brandeis D, Uebel H, Valko L, Heinrich H, Drechsler R, Heise A, Müller UC, Steinhausen HC, Rothenberger A, Banaschewski T: → **Familiality of neural preparation and response control in childhood attention deficit-hyperactivity disorder**. Psychol Med 43(9): 1997-2011, 2013

Albuquerque B, Häussler A, Vannoni E, Wolfer DP, Tegeder I: → **Learning and memory with neuropathic pain: impact of old age and progranulin deficiency**. Front Behav Neurosci 7: 174, 2013

Annema W, von Eckardstein A.: → **High-density lipoproteins. Multifunctional but vulnerable protections from atherosclerosis**. Circ J 77(10): 2432-48, 2013

Asarian L, Geary N: → **Sex differences in the physiology of eating**. Am J Physiol Regul Integr Comp Physiol 305(11): R1215-67, 2013

Auer-Grumbach M, Bode H, Pieber TR, Schabhüttl M, Fischer D, Seidl R, Graf E, Wieland T, Schuh R, Vacariu G, Grill F, Timmerman V, Strom TM, Hornemann T: → **Mutations at Ser331 in the HSN type I gene SPTLC1 are associated with a distinct syndromic phenotype**. Eur J Med Genet 56(5): 266-9, 2013

Ayers L, Stoewhas AC, Ferry B, Stradling J, Kohler M: → **Elevated levels of endothelial cell-derived microparticles following short-term withdrawal of continuous positive airway pressure in patients with obstructive sleep apnea: data from a randomized controlled trial**. Respiration 85(6): 478-85, 2013

- Blaser N, Dell'Omo G, Dell'Ariccia G, Wolfer DP, Lipp HP: → **Testing cognitive navigation in unknown territories: homing pigeons choose different targets.** *J Exp Biol* 216(16): 3123-31, 2013
- Breitenstein A, Wyss CA, Spescha RD, Franzeck FC, Hof D, Riwanto M, Hasun M, Akhmedov A, von Eckardstein A, Maier W, Landmesser U, Lüscher TF, Camici GG: → **Peripheral blood monocyte Sirt1 expression is reduced in patients with coronary artery disease.** *PLoS One* 8(1): e53106, 2013
- Bukowy-Bieryllo Z, Zietkiewicz E, Loges NT, Wittmer M, Geremek M, Olbrich H, Fliegau M, Voelkel K, Rutkiewicz E, Rutland J, Morgan L, Pogorzelski A, Martin J, Haan E, Berger W, Omran H, Witt M: → **RPGR mutations might cause reduced orientation of respiratory cilia.** *Pediatr Pulmonol* 48(4): 352-63, 2013
- Camen G, Clarenbach CF, Stöwhas AC, Rossi VA, Sievi NA, Stradling JR, Kohler M: → **The effects of simulated obstructive apnea and hypopnea on arrhythmic potential in healthy subjects.** *Eur J Appl Physiol* 113(2): 489-96, 2013
- Chen X, Boesiger P, Henning A: → **J-refocused 1H PRESS DEPT for localized 13C MR spectroscopy.** *NMR Biomed* 26(9): 1113-24, 2013
- Cippà PE, Gabriel SS, Chen J, Bardwell PD, Bushell A, Guimezanes A, Kraus AK, Wekerle T, Wüthrich RP, Fehr T: → **Targeting apoptosis to induce stable mixed hematopoietic chimerism and long-term allograft survival without myelosuppressive conditioning in mice.** *Blood* 122(9): 1669-77, 2013
- Clarenbach CF, Camen G, Sievi NA, Wyss C, Stradling JR, Kohler M: → **Effect of simulated obstructive hypopnea and apnea on thoracic aortic wall transmural pressures.** *J Appl Physiol* 115(5): 613-7, 2013
- Clarenbach CF, Senn O, Sievi NA, Camen G, van Gestel AJ, Rossi VA, Puhon MA, Thurnheer R, Russi EW, Kohler M: → **Determinants of endothelial function in patients with COPD.** *Eur Respir J* 42(5): 1194-204, 2013
- Dees C, Schlottmann I, Funke R, Distler A, Palumbo-Zerr K, Zerr P, Lin NY, Beyer C, Distler O, Schett G, Distler JH: → **The Wnt antagonists DKK1 and SFRP1 are downregulated by promoter hypermethylation in systemic sclerosis.** *Ann Rheum Dis* [Epub ahead of print], 2013
- Collin RW, Nikopoulos K, Dona M, Gilissen C, Hoischen A, Boonstra FN, Poulter JA, Kondo H, Berger W, Toomes C, Tahira T, Mohn LR, Blokland EA, Hetterschijt L, Ali M, Groothuismink JM, Duijkers L, Ingelhearn CF, Sollfrank L, Strom TM, Uchio E, van Nouhuys CE, Kremer H, Veltman JA, van Wijk E, Cremers FP: → **ZNF408 is mutated in familial exudative vitreoretinopathy and is crucial for the development of zebrafish retinal vasculature.** *Proc Natl Acad Sci U S A* 110(24): 9856-61, 2013
- Distler A, Deloch L, Huang J, Dees C, Lin NY, Palumbo-Zerr K, Beyer C, Weidemann A, Distler O, Schett G, Distler JH: → **Inactivation of tankyrases reduces experimental fibrosis by inhibiting canonical Wnt signalling.** *Ann Rheum Dis* 72(9): 1575-80, 2013
- Doehner M, Brandeis D, Schneider G, Drechsler R, Steinhausen HC: → **A neurophysiological marker of impaired preparation in an 11-year follow-up study of attention-deficit/hyperactivity disorder (ADHD).** *J Child Psychol Psychiatry* 54(3): 260-70, 2013
- Foldenauer U, Simova-Curd S, Nitzl D, Bogdanova A, Zollinger E, Hatt JM: → **Analysis of exhaled breath condensate in a mixed population of psittacine birds.** *J Avian Med Surg* 24(3): 185-91, 2013
- Hauser TU, Iannaccone R, Stämpfli P, Drechsler R, Brandeis D, Walitza S, Brem S: → **The feedback-related negativity (FRN) revisited: new insights into the localization, meaning and network organization.** *Neuroimage* 84: 159-68, 2014
- Illi SK, Hostettler S, Aliverti A, Spengler CM: → **Compartmental chest wall volume changes during volitional hyperpnoea with constant tidal volume in healthy individuals.** *Respir Physiol Neurobiol* 185(2): 410-5, 2013
- Jacomella V, Shenoy A, Mosimann K, Kohler MK, Amann-Vesti B, Husmann M: → **The impact of endovascular lower-limb revascularisation on the aortic augmentation index in patients with peripheral arterial disease.** *Eur J Vasc Endovasc Surg* 45(5): 497-501, 2013
- Jordi J, Verrey F, Lutz TA: → **Simultaneous assessment of gastric emptying and secretion in rats by a novel computed tomography-based method.** *Am J Physiol Gastrointest Liver Physiol* 306(3): G173-82, 2014
- Kloeckener-Gruissem B, Neidhardt J, Magyar I, Plauchu H, Zech JC, Morlé L, Palmer-Smith SM, Macdonald MJ, Nas V, Fry AE, Berger W: → **Novel VCAN mutations and evidence for unbalanced alternative splicing in the pathogenesis of Wagner syndrome.** *Eur J Hum Genet* 21(3): 352-6, 2013
- Kobayashi Y, Sano Y, Vannoni E, Goto H, Suzuki H, Oba A, Kawasaki H, Kanba S, Lipp HP, Murphy NP, Wolfer DP, Itoharu S: → **Genetic dissection of medial habenula-interpeduncular nucleus pathway function in mice.** *Front Behav Neurosci* 7: 17, 2013
- Kohler M, Craig S, Pepperell JC, Nicoll D, Bratton DJ, Nunn AJ, Leeson P, Stradling JR: → **CPAP improves endothelial function in patients with minimally symptomatic OSA: results from a subset study of the MOSAIC trial.** *Chest* 144(3): 896-902, 2013
- Kohler M, Pitcher A, Blair E, Risby P, Senn O, Forfar C, Wordsworth P, Stradling JR: → **The impact of obstructive sleep apnea on aortic disease in Marfan's syndrome.** *Respiration* 86(1): 39-44, 2013
- Kurakevich E, Hennem T, Hausmann M, Rogler G, Borsig L: → **Milk oligosaccharide sialyl(a2,3)lactose activates intestinal CD11c+ cells through TLR4.** *Proc Natl Acad Sci U S A* 110(43): 17444-9, 2013
- Liechti MD, Valko L, Müller UC, Döhrner M, Drechsler R, Steinhausen HC, Brandeis D: → **Diagnostic value of resting electroencephalogram in attention-deficit/hyperactivity disorder across the lifespan.** *Brain Topogr* 26(1): 135-51, 2013
- Link KR, Allio I, Rand JS, Eppler E: → **The effect of experimentally induced chronic hyperglycaemia on serum and pancreatic insulin, pancreatic islet IGF-I and plasma and urinary ketones in the domestic cat (Felis felis).** *Gen Comp Endocrinol* 188: 269-81, 2013
- Lutz HU, Bogdanova A: → **Mechanisms tagging senescent red blood cells for clearance in healthy humans.** *Front Physiol* 4: 387, 2013
- Martinez-Lozano Sinues P, Kohler M, Zenobi R: → **Human breath analysis may support the existence of individual metabolic phenotypes.** *PLoS One* 8(4): e59909, 2013

- Maurizio S, Liechti MD, Brandeis D, Jäncke L, Drechsler R: → **Differential EMG biofeedback for children with ADHD: a control method for neurofeedback training with a case illustration.** *Appl Psychophysiol Biofeedback* 38(2): 109-19, 2013
- Maurizio S, Liechti MD, Heinrich H, Jäncke L, Steinhausen HC, Walitza S, Brandeis D, Drechsler R: → **Comparing tomographic EEG neurofeedback and EMG biofeedback in children with attention-deficit/hyperactivity disorder.** *Biol Psychol* 95: 31-44, 2014
- Michels L, Lüchinger R, Koenig T, Martin E, Brandeis D: → **Developmental changes of BOLD signal correlations with global human EEG power and synchronization during working memory.** *PLoS One* 7(7): e39447, 2012
- Michels L, Muthuraman M, Lüchinger R, Martin E, Anwar AR, Raethjen J, Brandeis D, Siniatchkin M: → **Developmental changes of functional and directed resting-state connectivities associated with neuronal oscillations in EEG.** *Neuroimage* 81: 231-42, 2013
- Moes AD, van der Lubbe N, Zietse R, Loffing J, Hoorn EJ: → **The sodium chloride cotransporter SLC12A3: new roles in sodium, potassium, and blood pressure regulation.** *Pflugers Arch* 466(1): 107-18, 2013
- Moll K, Ramus F, Bartling J, Bruder J, Kunze S, Neuhoff N, Streiftau S, Lyytinen H, Leppänen P H T, Lohvansuu K, Tóth D, Honbolygó F, Csépe V, Bogliotti C, Iannuzzi S, Démonet J-F, Longeras E, Valdois S, George F, Soares-Boucaud I, Le Heuzey M-F, Billard C, O'Donovan M, Hill G, Williams J, Brandeis D, Maurer U, Schulz E, van der Mark S, Müller-Myhsok B, Schulte-Körne G, Landerl K: → **Cognitive mechanisms underlying reading and spelling development in five European orthographies.** *Learning and Instruction* 29: 65-77, 2014
- Morón B, Spalinger M, Kasper S, Atrott K, Frey-Wagner I, Fried M, McCole DF, Rogler G, Scharl M: → **Activation of protein tyrosine phosphatase non-receptor type 2 by spermidine exerts anti-inflammatory effects in human THP-1 monocytes and in a mouse model of acute colitis.** *PLoS One* 8(9): e73703, 2013
- Mullins PG, McGonigle DJ, O'Gorman RL, Puts NA, Vidyasagar R, Evans CJ; Cardiff Symposium on MRS of GABA, Edden RA: → **Current practice in the use of MEGA-PRESS spectroscopy for the detection of GABA.** *Neuroimage* 86: 43-52, 2014
- Nicoletti C, Spengler CM, Läubli T: → **Physical workload, trapezius muscle activity, and neck pain in nurses' night and day shifts: a physiological evaluation.** *Appl Ergon* 45(3): 741-6, 2014
- Nov O, Shapiro H, Ovadia H, Tarnovscki T, Dvir I, Shemesh E, Kovsan J, Shelef I, Carmi Y, Voronov E, Apte RN, Lewis E, Haim Y, Konrad D, Bashan N, Rudich A: → **Interleukin-1 β regulates fat-liver cross-talk in obesity by auto-paracrine modulation of adipose tissue inflammation and expandability.** *PLoS One* 8(1): e53626, 2013
- Paneni F, Osto E, Costantino S, Mateescu B, Briand S, Coppolino G, Perna E, Mocharla P, Akhmedov A, Kubant R, Rohrer L, Malinski T, Camici GG, Matter CM, Mechta-Grigoriou F, Volpe M, Lüscher TF, Cosentino F: → **Deletion of the activated protein-1 transcription factor JunD induces oxidative stress and accelerates age-related endothelial dysfunction.** *Circulation* 127(11): 1229-40, 2013
- Paulsen K, Tauber S, Goelz N, Simmet D, Engeli S, Birlem M, Dumrese C, Karer A, Hunziker S, Biskup J, Konopasek S, Suh D, Hürlimann E, Signer C, Wang A, Sang C, Grote K, Zhuang F, Ullrich O: → **Severe disruption of the cytoskeleton and immunologically relevant surface molecules in a human macrophageal cell line in microgravity—Results of an in vitro experiment on board of the Shenzhou-8 space mission.** *Acta Astronautica* 94: 277-292, 2014
- Picard N, Trompf K, Yang CL, Miller RL, Carrel M, Loffing-Cueni D, Fenton RA, Ellison DH, Loffing J: → **Protein Phosphatase 1 Inhibitor-1 Deficiency Reduces Phosphorylation of Renal NaCl Cotransporter and Causes Arterial Hypotension.** *J Am Soc Nephrol* 25(3): 511-22, 2013
- Ringli M, Souissi S, Kurth S, Brandeis D, Jenni OG, Huber R: → **Topography of sleep slow wave activity in children with attention-deficit/hyperactivity disorder.** *Cortex* 49(1): 340-7, 2013
- Robert J, Lehner M, Frank S, Perisa D, von Eckardstein A, Rohrer L: → **Interleukin 6 stimulates endothelial binding and transport of high-density lipoprotein through induction of endothelial lipase.** *Arterioscler Thromb Vasc Biol* 33(12): 2699-706, 2013
- Robert J, Weber B, Frese L, Emmert MY, Schmidt D, von Eckardstein A, Rohrer L, Hoerstrup SP: → **A three-dimensional engineered artery model for in vitro atherosclerosis research.** *PLoS One* 8(11): e79821, 2013
- Rodewald K, Holt DV, Rentrop M, Roesch-Ely D, Liebreiz M, Funke J, Weisbrod M, Kaiser S: → **Predictors for Improvement of Problem-Solving during Cognitive Remediation for Patients with Schizophrenia.** *J Int Neuropsychol Soc* [Epub ahead of print], 2014
- Romano A, Potes CS, Tempesta B, Casasano T, Cuomo V, Lutz T, Gaetani S: → **Hindbrain noradrenergic input to the hypothalamic PVN mediates the activation of oxytocinergic neurons induced by the satiety factor oleoylethanolamide.** *Am J Physiol Endocrinol Metab* 305(10): E1266-73, 2013
- Rossi VA, Winter B, Rahman NM, Yu LM, Fallon J, Clarenbach CF, Bloch KE, Stradling JR, Kohler M: → **The effects of Provent on moderate to severe obstructive sleep apnoea during continuous positive airway pressure therapy withdrawal: a randomised controlled trial.** *Thorax* 68(9): 854-9, 2013
- Schaer DJ, Buehler PW: → **Cell-free hemoglobin and its scavenger proteins: new disease models leading the way to targeted therapies.** *Cold Spring Harb Perspect Med* 3(6): a013433, 2013
- Schäfer N, Lohmann C, Winnik S, van Tits LJ, Miranda MX, Vergopoulos A, Ruschitzka F, Nussberger J, Berger S, Lüscher TF, Verrey F, Matter CM: → **Endothelial mineralocorticoid receptor activation mediates endothelial dysfunction in diet-induced obesity.** *Eur Heart J* 34(45): 3515-24, 2013
- Schmid F, Hiller T, Korner G, Glaus E, Berger W, Neidhardt J: → **A gene therapeutic approach to correct splice defects with modified U1 and U6 snRNPs.** *Hum Gene Ther* 24(1): 97-104, 2013

Schulz UG, Mason RH, Craig SE, Howard S, Nicoll DJ, Kohler M, Rothwell PM, Stradling JR: → **Leukoaraiosis on MRI in patients with minimally symptomatic obstructive sleep apnoea**. *Cerebrovasc Dis* 35(4): 363-9, 2013

Sinues PM, Kohler M, Zenobi R: → **Monitoring diurnal changes in exhaled human breath**. *Anal Chem* 85(1): 369-73, 2013

Sonuga-Barke EJ, Brandeis D, Cortese S, Daley D, Ferrin M, Holtmann M, Stevenson J, Danckaerts M, van der Oord S, Döpfner M, Dittmann RW, Simonoff E, Zuddas A, Banaschewski T, Buitelaar J, Coghill D, Hollis C, Konofal E, Lecendreux M, Wong IC, Sergeant J: → **Nonpharmacological interventions for ADHD: systematic review and meta-analyses of randomized controlled trials of dietary and psychological treatments**. *Am J Psychiatry* 170(3): 275-89, 2013

Sorensen MV, Grossmann S, Roesinger M, Gresko N, Todkar AP, Barmettler G, Ziegler U, Odermatt A, Loffing-Cueni D, Loffing J: → **Rapid dephosphorylation of the renal sodium chloride cotransporter in response to oral potassium intake in mice**. *Kidney Int* 83(5): 811-24, 2013

Speer T, Rohrer L, Blyszczuk P, Shroff R, Kuschnerus K, Kränkel N, Kania G, Zewinger S, Akhmedov A, Shi Y, Martin T, Perisa D, Winnik S, Müller MF, Sester U, Wernicke G, Jung A, Gutteck U, Eriksson U, Geisel J, Deanfield J, von Eckardstein A, Lüscher TF, Fliser D, Bahlmann FH, Landmesser U: → **Abnormal high-density lipoprotein induces endothelial dysfunction via activation of Toll-like receptor-2**. *Immunity* 38(4): 754-68, 2013

Spichtig D, Zhang H, Mohebbi N, Pavik I, Petzold K, Stange G, Saleh L, Edenhofer I, Segerer S, Biber J, Jaeger P, Serra AL, Wagner CA: → **Renal expression of FGF23 and peripheral resistance to elevated FGF23 in rodent models of polycystic kidney disease**. *Kidney Int* [Epub ahead of print], 2014

Stadelmann K, Latshang TD, Lo Cascio CM, Tesler N, Stoewhas AC, Kohler M, Bloch KE, Huber R, Achermann P: → **Quantitative changes in the sleep EEG at moderate altitude (1630 m and 2590 m)**. *PLoS One* 8(10): e76945, 2013

Steinhausen HC, Göllner J, Brandeis D, Müller UC, Valko L, Drechsler R: → **Psychopathology and personality in parents of children with ADHD**. *J Atten Disord* 17(1): 38-46, 2013

Tauber S, Hauschild S, Crescio C, Secchi C, Paulsen K, Pantaleo A, Saba A, Buttron I, Thiel CS, Cogoli A, Pippia P, Ullrich O: → **Signal transduction in primary human T lymphocytes in altered gravity - results of the MASER-12 suborbital space flight mission**. *Cell Commun Signal* 11(1): 32, 2013

Tomcik M, Zerr P, Pitkowski J, Palumbo-Zerr K, Avouac J, Distler O, Becvar R, Senolt L, Schett G, Distler JH: → **Heat shock protein 90 (Hsp90) inhibition targets canonical TGF-β signalling to prevent fibrosis**. *Ann Rheum Dis* [Epub ahead of print], 2013

Urry E, Landolt HP: → **Adenosine, Caffeine, and Performance: From Cognitive Neuroscience of Sleep to Sleep Pharmacogenetics**. *Curr Top Behav Neurosci* [Epub ahead of print], 2014

van Gestel AJ, Camen G, Clarenbach CF, Sievi N, Rossi VA, Kohler M: → **Quantifying the speed of fluctuations in systolic blood pressure**. *Hypertens Res* 36(12): 1039-44, 2013

Vuilleumier N, Dayer JM, von Eckardstein A, Roux-Lombard P: → **Pro- or anti-inflammatory role of apolipoprotein A-1 in high-density lipoproteins?**. *Swiss Med Wkly* 25: 143, 2013

Wang J, Wagner-Britz L, Bogdanova A, Ruppenthal S, Wiesen K, Kaiser E, Tian Q, Krause E, Bernhardt I, Lipp P, Philipp SE, Kaestner L: → **Morphologically homogeneous red blood cells present a heterogeneous response to hormonal stimulation**. *PLoS One* 8(6): e67697, 2013

Wang L, Jia Y, Rogers H, Suzuki N, Gassmann M, Wang Q, McPherron AC, Kopp JB, Yamamoto M, Noguchi CT: → **Erythropoietin contributes to slow oxidative muscle fiber specification via PGC-1α and AMPK activation**. *Int J Biochem Cell Biol* 45(7): 1155-64, 2013

Warinner C, Rodrigues JF, Vyas R, Trachsel C, Shved N, Grossmann J, Radini A, Hancock Y, Tito RY, Fiddyment S, Speller C, Hendy J, Charlton S, Luder HU, Salazar-García DC, Eppler E, Seiler R, Hansen LH, Castruita JA, Barkow-Oesterreicher S, Teoh KY, Kelstrup CD, Olsen JV, Nanni P, Kawai T, Willerslev E, von Mering C, Lewis CM Jr, Collins MJ, Gilbert MT, Rühli F, Cappellini E: → **Pathogens and host immunity in the ancient human oral cavity**. *Nat Genet* [Epub ahead of print], 2014

Woernle CM, Sarnthein J, Foit NA, Krayenbühl N: → **Enhanced serum creatine kinase after neurosurgery in lateral position and intraoperative neurophysiological monitoring**. *Clin Neurol Neurosurg* 115(3): 266-9, 2013

Zobi F, Blacque O, Jacobs RA, Schaub MC, Bogdanova AY: → **17 e-rhenium dicarbonyl CO-releasing molecules on a cobalamin scaffold for biological application**. *Dalton Trans* 41(2): 370-8, 2013

Zobi F, Quaroni L, Santoro G, Zlateva T, Blacque O, Sarafimov B, Schaub MC, Bogdanova AY: → **Live-fibroblast IR imaging of a cytoprotective PhotoCORM Activated with Visible Light**. *J Med Chem* 56(17): 6719-31, 2013

Imprint

Zurich Center for Integrative Human Physiology (ZIHP), Winterthurerstr. 190, 8057 Zurich
 Editorial staff: M. Seebauer, C. Giger, H. Preisig, G. Roth, and Max Gassmann
 URL: <http://www.zihp.uzh.ch>, E-Mail: info@zihp.uzh.ch, Tel +41 44 635 50 88/47

