



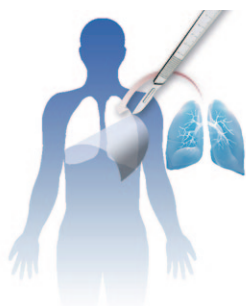
# ZIHP News

Zurich Center for Integrative Human Physiology

2-2015 • April 2015

## Zürcher Pioniere der modernen Chirurgie

### WISSEN-SCHAFT<sup>F</sup> WISSEN



#### → Pionier mit langem Atem

Professor Walter Weder führte 1992 die erste erfolgreiche Lungentransplantation in der Schweiz durch. In der Veranstaltungsreihe «Wissenschaft(f)t Wissen» gab er Einblick in die Pionierzeit, die seither erfolgten Verbesserungen der Operationstechnik – und den Mangel an Spenderorganen.



#### → Das zurückgewonnene Lächeln

Gesichtslähmungen verursachen viel Leid. Pietro Giovanoli, Professor für Wiederherstellungschirurgie, erläuterte in der Veranstaltungsreihe «Wissenschaft(f)t Wissen», wie er durch die Transplantation von Nerven und Muskeln seinen Patienten das Lächeln und die Lebensfreude neu schenkt.

#### Nächste Veranstaltungen

20. April 2015

→ Mit dem Skalpell am ungeborenen Kind

Prof. Martin Meuli, Direktor der Klinik für Kinderchirurgie, Kinderspital Zürich

18. Mai 2015

→ Neurochirurgie: Höchste Präzision durch innovative Technologie

Prof. Luca Regli, Direktor der Klinik für Neurochirurgie, Universitäts-Spital Zürich

## August 21, 2015: 11<sup>th</sup> ZIHP Symposium - Call for abstracts

Basic researchers and clinical scientists will get together at the → 11<sup>th</sup> ZIHP Symposium at the University of Zurich to present and discuss their research in fields related to human physiology. Oral presentations and posters will give junior researchers the opportunity to present and discuss their cutting-edge results. Cash prizes will be awarded for the best presentation and the best posters.

Keynote speakers:

→ Prof. Sir Peter Ratcliffe, Nuffield Department of Medicine, University of Oxford, U.K.

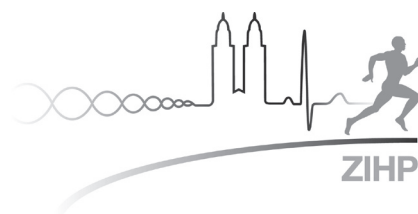
→ Prof. Dr. Dr. Thomas Thum, Institute of Molecular and Translational Therapeutic Strategies, Hannover Medical School, Germany

→ Prof. Dr. Florian Lang, Institute of Physiology, University of Tübingen, Germany

→ Prof. Dr. Fabrizio Benedetti, National Institute of Neuroscience, University of Turin, Italy

Abstracts for oral presentations and posters can now be submitted on the → website of the symposium.

Deadline for submission of abstracts is June 1, 2015.



## Synthetic Biology: Engineering meets Biology

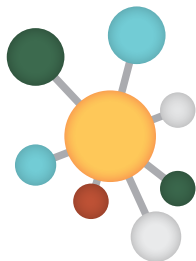
**Synthetic biology incorporates approaches known from engineering disciplines into biology. To discuss this we invited five guests for the → Vision 2020 series.**

Marek Whitehead

Our first guest was Sven Panke from the ETH Zurich. His goal is to create predictable enzymatic networks. In engineering disciplines standardised parts are combined to build logical circuits. To achieve the same in biological systems standardised genetic parts and circuits must still be created, characterised and mathematically modelled. The group of Sven Panke does precisely this with reactions during glycolysis. By using mathematical models they determined kinetic parameters of this pathway and try to alter its kinetics to change its equilibrium and enrich certain intermediates that can serve as substrates for diverting synthetic pathways.

### Educated immune cells

Next, we invited Benjamin Geiger from the Weizmann Institute of Science in Israel. His research focus is on extracellular matrix proteins and their role during adhesion. He has developed an approach that may be used to educate specific immune cells outside the body. These could then be used to



steer responses against cancer cells once placed back into the body. To achieve this, his group confronts native T cells with their antigen in artificial scaffolds of integrins that are associated with strong stimulatory effects. With this strategy they have been able to enhance T cell mediated reactions towards cancer cell associated antigens.

### Minimizing side effects

Guillermo de la Cueva Méndez from Bionand in Spain was our third guest. The most medications targeting cancer cells are selected upon their ability to mainly damage malignant cells while leaving normal cells relatively intact. However, these medications are often not entirely specific and cause damage to healthy tissue. Guillermo de la Cueva Méndez and his team use a relatively unspecific cellular toxin in combination with a cytoprotective agent for normal cells. Kid is a toxin that cleaves specific mRNAs at defined recognition sites. Normal cells can be protected if they are specifically associated with the protein Kis which can inactivate Kid. In this system high Kis levels correlate with functional p53 levels due to a genetic circuit that is incorporated into the genome. P53 is a known tumour suppressor gene that is frequently defective in cancer cells.



### imMed alumni into industry

Finally, our last two guests were alumni of the imMed PhD Program. Micha Häuptle works in analytics at the company GlycoVaxyn which has recently been purchased by Glaxo-SmithKline. The key development of this company is their «Bioconjugate Vaccine Technology» which enables them to produce carbohydrate-protein-conjugates for vaccination in cell culture instead of the tedious chemical methods used to couple proteins to carbohydrates presently. Christian Caprara from the Swiss Stem Cell foundation was the second imMed alumnus. His work focusses on using stem cells derived from fat tissue for regenerative medicine instead of the ethically disputed use of embryonic stem cells and the risky application of induced pluripotent stem cells.

In summary, the increasing importance of synthetic biological approaches in multiple disciplines has become apparent in this Vision 2020 series. The title of the spring term → Vision 2020 series is «A trillion Friends & Me» and will be about the interactions between the host and its microbiota.

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».

## imMed PhD Program: Retreat 2015

The →10<sup>th</sup> retreat of the PhD Program in Integrative Molecular Medicine (imMed) will take the PhD students to Solothurn on June 1 and 2, 2015. On the first day some of the imMed PhD students will present their projects in talks or on posters at the Youth Hostel Solothurn. In the evening the focus is on career development. This year's special guest is Dr. Roger Gförer from UZH Career Services. He will give an input talk on «What you need to find an exciting position after the PhD».

The second day will be spent at the Seilpark Balmberg, a fixed rope park on a Jura hill near Solothurn at around 1000 m altitude. On various parcours with different skill levels, the participants can experience a new perspective of the forest at a height from 4 to 20 meters, an unforgettable mix of adventure, thrills, nature and pure human physiology from adrenalin to Z line.

## imMed PhD Program Register now!

June 11/12, 2015

→ **Mouse physiology and pathophysiology**

Registration deadline: May 15, 2015

## imMed PhD Program: Finished PhD theses 2014

Behera A (2014): → **Improved FRET sensor to identify immuno-regulatory high affinity L-tryptophan transport machinery in tumor cells.** Institute of Physiology, UZH

Chan K (2014): → **Renal adaptive response to metabolic acidosis and the role and regulation of gelsolin (GSN) and Slc38a3 (SNAT3).** Institute of Physiology, UZH

Chen C (2014): → **Optokinetic nystagmus in fish and man.** Division of Neurology, USZ

Chin S (2014): **Opposing effects of reduced kidney mass on liver and skeletal muscle insulin sensitivity in obese mice.** Endocrinology and Diabetology, University Children's Hospital Zurich

Di Chiara M (2014): → **The Role of the GTPase-Activating Protein TBC1D4 (AS160) in Mouse Kidney.** Institute of Anatomy, UZH

Engelhardt S (2014): → **Facing Hypoxia and Ischemia - Cell-Specific Signaling and Metabolism at the Blood-Brain Barrier.** Institute of Veterinary Physiology, UZH

Frei S (2014): **The Impact of Epithelial-to-Mesenchymal Transition in the Pathogenesis of Crohn's Disease- Associated Perianal Fistulas.** Division of Gastroenterology and Hepatology, USZ

Guettg A (2014): → **Cooperation of Basolateral Amino Acid Transporters in Mouse and Cell Culture Models.** Institute of Physiology, UZH

Güntert T (2014): → **Role of Rac1 in Neuronal Responses to Injury: Hypoxia and Oxysphingolipid-Induced Neurotoxicity.** Institute of Veterinary Physiology, UZH

Huber-Reggi S (2014): → **Effects of Axonal Misrouting at the Optic Chiasm on Motor Behavior in Zebrafish Larvae.** Institute of Molecular Life Sciences, UZH

Liu Y (2014): → **Multi-targeting of the mTOR signaling pathway is a novel therapeutic strategy in autosomal dominant polycystic kidney disease.** Institute of Physiology, UZH

Makhro A (2014): → **Functional NMDA receptors in red blood cells and heart.** Institute of Veterinary Physiology, UZH

Miranda M (2014): **The Sirt1 activator SRT3025 provides atheroprotection in Apoe<sup>-/-</sup> mice by reducing hepatic Pcsk9 secretion and enhancing Ldlr expression.** Clinic for Cardiology, USZ and Center for Molecular Cardiology, UZH

Mirsaidi A (2014): **Therapeutic potential of adipose-derived stromal cells for the treatment of senile osteoporosis.** Center for Applied Biotechnology and Molecular Medicine, UZH

Oczos J (2014): → **The role of paraoxonase-1 in retinal physiology and age-related macular degeneration.** Institute of Medical Molecular Genetics, UZH

Perisa D (2014): **The Itinerary of High Density Lipoproteins through Endothelial Cells.** Institute of Clinical Chemistry, USZ

Pugin F (2014): → **Sleep electrophysiological changes in relation to cerebral oxygenation and after intensive working memory training in children and adolescents.** Child Development Center, University Children's Hospital Zurich

Spalinger M (2014): **The Role of PTPN22 in the Pathogenesis of Inflammatory Bowel Disease.** Division of Gastroenterology and Hepatology, USZ

Spescha R (2014): **The Role of the Adaptor Protein p66Shc in Ischemic Stroke.** Center for Molecular Cardiology, USZ

Torrente M (2014): → **Regulation of the Amino Acid Transporter BOAT1 Expression in Renal Epithelial Cells.** Institute of Physiology, UZH

Wiedemann M (2014): **The role of white adipose tissue in the development of obesity-associated insulin resistance and endogenous fat mass control.** Endocrinology and Diabetology, University Children's Hospital Zurich

## Events

### Events organized by the ZIHP

April 14, 2015 - ZIHP Lunch Seminar  
 → Multimodal monitoring of cerebral hemodynamics, metabolism and oxygenation in neurointensive care  
 Prof. Dr. Emanuela Keller, Department of Neurosurgery, USZ

April 28, 2015 - ZIHP Lunch Seminar  
 → Adipose tissue formation and function and the development of metabolic disorders  
 Prof. Dr. Christian Wolfrum, Institute of Food Nutrition and Health, ETH Zurich

May 12, 2015 - ZIHP Lunch Seminar  
 → Renal disorders induced by monoclonal light chains  
 Prof. Dr. Frank Bridoux, Nephrology, Centre hospitalier universitaire de Poitiers (CHU), France

May 26, 2015 - ZIHP Lunch Seminar  
 → Non-invasive EEG recordings of human neocortical population spikes  
 Prof. Dr. Gabriel Curio, Neurophysics Group, Charité – Universitätsmedizin Berlin, Germany

### Other events with the involvement of ZIHP members

April 14, 2015 - PhD Thesis Defense  
 → Role of pH-Sensing (or Proton-Activated) Receptor - GPR4 and OGR1 in Intestinal Inflammation  
 Yu Wang, Institute of Physiology, UZH

April 14, 2015  
 → Amino-acid transporter at1 is necessary for neural tube closure  
 Dr. Nadège Poncet, Institute of Physiology, UZH

April 15, 2015  
 → Dynamic imaging of kidney function using intra-vital multiphoton microscopy  
 Dr. Claus-Dieter Schuh, Institute of Anatomy, UZH

April 15, 2015  
 → Sleep, Dreams and Consciousness  
 Dr. Michael Czisch, Core Unit Neuroimaging, Max-Planck-Institut für Psychiatrie, München, Germany

April 20, 2015  
 → Mechanismus of age related vascular dysfunction and diseases  
 PD Dr. Giovanni G. Camici, Center of Molecular Cardiology, UZH

April 21, 2015  
 → Importance of peripheral and central adaptations to exercise training  
 Dr. David Montero, Institute of Physiology, UZH

April 22, 2015  
 → Renal tight junctions and their regulation  
 Prof. Dr. Markus Bleich, Institute of Physiology, University of Kiel, Germany

April 24, 2015  
 → The neural correlates of consciousness in sleep  
 Francesca Siclari, Centre d'investigation et de recherche sur le sommeil, CHUV, Lausanne

April 27, 2015  
 → Prospects of large animal models: Methods and potential for science and medicine  
 Dr. Nikolai Klymiuk, Molecular Animal Breeding and Biotechnology, LMU Munich, Germany

April 29, 2015  
 → Transnational Neuromodeling  
 Prof. Dr. Klaas Enno Stephan, Transnational Neuromodeling Unit, Institut for Biomedical Engineering, UZH & ETHZ

April 29, 2015  
 → Novel far red and fluorogenic probes for fluorescence microscopy of live cells and tissues  
 Dr. Luc Reymond, Institute of Chemical Sciences and Engineering, EPFL

May 4, 2015  
 → Stammzellentransplantation bei Kindern  
 PD Dr. Tayfun Güngör, Div. of Stem Cell Transplantation, University Children's Hospital Zurich

May 5, 2015  
 → Circadian and homeostatic regulation of human brain functions  
 Prof. Pierre Maquet, Cyclotron Research Centre, University of Liège, Belgium

May 5, 2015  
 → Acanthamoeba polyphaga Mimivirus - a giant with sweet features  
 Nina Hochhold and Anna Rommel, Institute of Physiology, UZH

May 6, 2015  
 → A novel role of aldosterone in energy homeostasis  
 Dr. Wan-Hui Liao, Inst. of Anatomy, UZH

May 11, 2015  
 → The role of steroids in the prevention and treatment of bronchopulmonary dysplasia in preterm infants  
 Prof. Dr. Dirk Bassler, Department of Neonatology, USZ

May 13, 2015 - PhD Thesis Defense  
 → Renal function and disease in zebrafish  
 Yuya Sugano, Institute of Anatomy, UZH

May 13, 2015  
 → Causal relations between behaviour and adult neurogenesis in laboratory mice  
 Maarten van Dijk, Inst. of Anatomy, UZH

May 13, 2015  
 → The ISS experiment CELLBOX-PRIME: Long-term alterations in primary human macrophages in microgravity  
 Dr. Svantje Tauber, Inst. of Anatomy, UZH

May 15, 2015  
 → Body representation in the dreams of limb amputees – results from a nationwide survey  
 Dr. Robin Bekrater-Bodmann, Central Institute of Mental Health, Medical Faculty Mannheim, Germany

May 18, 2015  
 → The mobilome, its epigenetic controllers and the shaping of transcriptional networks  
 Prof. Dr. Didier Trono, EPFL, School of Life Sciences, Lausanne

May 19, 2015  
 → Kidney diseases: Continuum from rare disorders to general population risk  
 Prof. Dr. Olivier Devuyst, Institute of Physiology, UZH

May 22, 2015  
 → Sleep and Plasticity: Potential Mechanisms of Therapeutic Sleep Deprivation in Major Depression  
 PD Dr. Christoph Nissen, Department of Psychophysiology/Sleep Medicine, Universitätsklinikum Freiburg, Germany

May 27, 2015  
 → Gravity-dependent regulation of T-cells  
 Swantje Hauschild, Inst. of Anatomy, UZH

May 29, 2015  
 → The autoimmune hypothesis of narcolepsy  
 Dr. Brigitte Kornum, Department of Neurophysiology, Glostrup Hospital, University of Copenhagen, Denmark

## Press review

### → Schlafen macht schlau

Unser Gehirn arbeitet nachts auf Hochtouren: Schlaf unterstützt Lernaktivitäten und kann sogar helfen, Ängste abzulegen. Dem kindlichen Tiefschlaf kommt dabei laut ZIHP-Forscher Reto Huber vom Kinderspital Zürich eine entscheidende Rolle zu.

NZZ am Sonntag, 5. April 2015

### → Stimmt es, dass die Darmflora das Befinden beeinflusst?

Ja und nein, sagt ZIHP-Mitglied Gerhard Rogler, Professor für Gastroenterologie und Hepatologie am Universitätsspital Zürich.

Journal. Die Zeitung der Universität Zürich, 30. März 2015

### → Marc Donath und das Geheimnis der Beta-Zellen

Beim Typ-2-Diabetes führt eine Entzündung zum Tod der insulinproduzierenden Zellen. Das hat Marc Donath, ehemaliges Mitglied des ZIHP-Leitungsausschusses, nachgewiesen und sich damit nicht nur Freunde gemacht.

Neue Zürcher Zeitung, 19. März 2015

### → Im Reich der Sinne

Die BrainFair 2015 widmete sich der Sinneswahrnehmung. An einem Podium zum Tastsinn - mit dabei ZIHP-Mitglied Hans Jung - wurde klar: Tasten und spüren sind wichtige Wahrnehmungen, speziell für blinde Menschen. Neue Technologien versuchen, den Tastsinn zu imitieren.

UZH News, 19. März 2015

### → Gemeinsam tüfteln

Der Physiologe und ZIHP-Forscher Vartan Kurtcuoglu ist ein Grenzgänger zwischen Medizin und Ingenieurwesen. In seiner Lehrveranstaltung lernen angehende Mediziner und Ingenieure, gemeinsam Probleme zu lösen.

UZH News, 16. Februar 2015

### → «Es ist das kleinste Drogenproblem»

Der ZIHP-Forscher Boris Quednow sagt, dass die Wirkung von Khat zwischen einem starken Kaffee und Ritalin liege.

Tages-Anzeiger, 7. Februar 2015

## imMed PhD Program – new students

Since the last recruitment round 20 new PhD students who were accepted to the PhD Program in Integrative Molecular Medicine (imMed) started their work here in Zurich. Welcome!

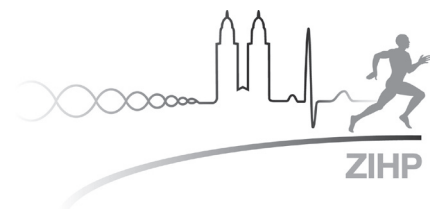
Chantre Christophe, Swiss Center for Regenerative Medicine, USZ/UZH  
 Diaz Canestra Candela, Center for Molecular Cardiology, USZ/UZH  
 Festa Beatrice, Institute of Physiology, UZH  
 Göranson Mareike, Swiss Center for Regenerative Medicine, USZ/UZH  
 Keller Daniel, Division of Urology, USZ  
 Kow Yen Ling, Institute of Physiology, UZH  
 Kozlova Anastasiia, Department of Rheumatology, USZ  
 Kummer Sandra, Swiss Center for Regenerative Medicine, USZ/UZH  
 Lintas Valentina, Swiss Center for Regenerative Medicine, USZ/UZH  
 Malagola Ermanno, Division of Visceral and Transplant. Surgery Research, USZ  
 Mallone Anna, Swiss Center for Regenerative Medicine, USZ/UZH  
 Motta Sarah, Swiss Center for Regenerative Medicine, USZ/UZH  
 Orlando Ilaria, Institute of Physiology, UZH  
 Pickel Christina, Institute of Physiology, UZH  
 Plessl Tanja, Division of Metabolism, University Children's Hospital Zurich  
 Schniering Janine, Department of Rheumatology, USZ  
 Stellato Mara, Department of Rheumatology, USZ  
 Tarasco Erika, Institute for Veterinary Physiology, UZH  
 Tsao Chih-Chieh, Institute for Veterinary Physiology, UZH  
 Vdovenko Daria, Center for Molecular Cardiology, USZ/UZH

## Congratulations!

Die Entwicklungspädiaterin und ZIHP-Forscherin Prof. Bea Latal vom Universitäts-Kinderspital Zürich hat den renommierten → **Georg-Friedrich-Götz-Preis 2014** erhalten.

### Imprint

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## Recent publications

- Abegg K, Corteville C, Docherty NG, Boza C, Lutz TA, Muñoz R, le Roux CW: → **Effect of bariatric surgery combined with medical therapy versus intensive medical therapy or caloric restriction and weight loss on glycemic control in ZDF rat.** *Am J Physiol Regul Integr Comp Physiol* 308(4): R321-9, 2015
- Boretti FS, Baek JH, Palmer AF, Schaer DJ, Buehler PW: → **Modeling hemoglobin and hemoglobin:haptoglobin complex clearance in a non-rodent species-pharmacokinetic and therapeutic implications.** *Front Physiol* 5: 385, 2014
- Buchmann AF, Hohm E, Witt SH, Bloemeyer D, Jennen-Steinmetz C, Schmidt MH, Esser G, Banaschewski T, Brandeis D, Laucht M: → **Role of CNR1 polymorphisms in moderating the effects of psychosocial adversity on impulsivity in adolescents.** *J Neural Transm* 122(3): 455-63, 2015
- Dauvilliers Y, Tafti M, Landolt HP: → **Catechol-O-methyltransferase, dopamine, and sleep-wake regulation.** *Sleep Med Rev* [Epub ahead of print], 2014
- Demoulin N, Aydin S, Cosyns JP, Dahan K, Cornet G, Auberger I, Loffing J, Devuyst O: → **Gitelman syndrome and glomerular proteinuria: a link between loss of sodium-chloride cotransporter and podocyte dysfunction?** *Nephrol Dial Transplant* 29 Suppl 4: iv117-20, 2014
- Dohrn MF, Othman A, Hirshman SK, Bode H, Alecu I, Fähndrich E, Karges W, Weis J, Schulz JB, Hornemann T, Claeys KG: → **Elevation of plasma 1-deoxy-sphingolipids in type 2 diabetes mellitus: a susceptibility to neuropathy?** *Eur J Neurol* [Epub ahead of print], 2015
- Eppler E, Janas E, Link K, Weidmann L, Bischofberger H, Wenger M, Tinguely M, Schraml P, Moch H, Fellbaum C: → **Insulin-like growth factor I is expressed in classical and nodular lymphocyte-predominant Hodgkin's lymphoma tumour and microenvironmental cells.** *Cell Tissue Res* 359(3): 841-51, 2015
- Flück D, Siebenmann C, Keiser S, Cathomen A, Lundby C: → **Cerebrovascular reactivity is increased with acclimatization to 3454 m altitude.** *J Cereb Blood Flow Metab* [Epub ahead of print], 2015
- Frew IJ, Moch H: → **A clearer view of the molecular complexity of clear cell renal cell carcinoma.** *Annu Rev Pathol* 10: 263-89, 2015
- Fuady JH, Bordoli MR, Abreu-Rodriguez I, Kristiansen G, Hoogewijs D, Stiehl DP, Wenger RH: → **Hypoxia-inducible factor-mediated induction of Wnt-1 induced signaling protein 2 contributes to attenuated progression of breast cancer.** *Hypoxia* 4(2): 23-33, 2015
- Gammella E, Diaz V, Recalcati S, Buratti P, Samaja M, Dey S, Noguchi CT, Gassmann M, Cairo G: → **Erythropoietin's inhibiting impact on hepcidin expression occurs indirectly.** *Am J Physiol Regul Integr Comp Physiol* 308(4): R330-5, 2015
- Hanggi P, Telezhkin V, Kemp PJ, Schmutz M, Gassmann M, Goede JS, Speer O, Bogdanova A: → **Functional plasticity of the N-methyl-D-aspartate receptor in differentiating human erythroid precursor cells.** *Am J Physiol Cell Physiol* [Epub ahead of print], 2015
- Hauser TU, Iannaccone R, Walitza S, Brandeis D, Brem S: → **Cognitive flexibility in adolescence: neural and behavioral mechanisms of reward prediction error processing in adaptive decision making during development.** *Neuroimage* 104: 347-54, 2015
- Herová M, Schmid M, Gemperle C, Hersberger M: → **ChemR23, the Receptor for Chemerin and Resolvin E1, Is Expressed and Functional on M1 but Not on M2 Macrophages.** *J Immunol* 194(5): 2330-7, 2015
- Hick M, Herrmann U, Weyer SW, Mallm JP, Tschäpe JA, Borgers M, Mercken M, Roth FC, Draguhn A, Slomianka L, Wolfer DP, Korte M, Müller UC: → **Acute function of secreted amyloid precursor protein fragment APPs<sub>α</sub> in synaptic plasticity.** *Acta Neuropathol* 129(1): 21-37, 2015
- Iannaccone R, Hauser TU, Ball J, Brandeis D, Walitza S, Brem S: → **Classifying adolescent attention-deficit/hyperactivity disorder (ADHD) based on functional and structural imaging.** *Eur Child Adolesc Psychiatry* [Epub ahead of print], 2015
- Iannaccone R, Hauser TU, Staempfli P, Walitza S, Brandeis D, Brem S: → **Conflict monitoring and error processing: new insights from simultaneous EEG-fMRI.** *Neuroimage* 105: 395-407, 2015
- Ikenberg K, Valtcheva N, Brandt S, Zhong Q, Wong CE, Noske A, Rechsteiner M, Rueschoff JH, Caduff R, Dellas A, Obermann E, Fink D, Fuchs T, Krek W, Moch H, Frew IJ, Wild PJ: → **KPNA2 is overexpressed in human and mouse endometrial cancers and promotes cellular proliferation.** *J Pathol* 234(2): 239-52, 2014
- Jäncke L, Mérillat S, Liem F, Hänggi J: → **Brain size, sex, and the aging brain.** *Hum Brain Mapp* 36(1): 150-69, 2015
- Klinke G, Rohrbach M, Giugliani R, Burda P, Baumgartner MR, Tran C, Gautschi M, Mathis D, Hersberger M: → **LC-MS/MS based assay and reference intervals in children and adolescents for oxysterols elevated in Niemann-Pick diseases.** *Clin Biochem* [Epub ahead of print], 2015
- Le Corre S, Viau A, Burtin M, El-Karoui K, Cnops Y, Terryn S, Debaix H, Bérissi S, Gubler MC, Devuyst O, Terzi F: → **Cystic gene dosage influences kidney lesions after nephron reduction.** *Nephron Physiol* 29(1): 42-51, 2015
- Lehmann M, Pirinen E, Mirsaidi A, Kunze FA, Richards PJ, Auwerx J, Hottiger MO: → **ARTD1-induced poly-ADP-ribose formation enhances PPAR $\gamma$  ligand binding and co-factor exchange.** *Nucleic Acids Res* 43(1): 129-42, 2015
- Lenggenhager B, Hilti L, Brugger P: → **Disturbed Body Integrity and the «Rubber Foot Illusion».** *Neuropsychology* 29(2): 205-11, 2015
- Liem F, Hurschler MA, Jäncke L, Meyer M: → **On the planum temporale lateralization in suprasegmental speech perception: evidence from a study investigating behavior, structure, and function.** *Hum Brain Mapp* 35(4): 1779-89, 2014
- Lustenberger C, Murbach M, Tüshaus L, Wehrle F, Kuster N, Achermann P, Huber R: → **Inter-individual and intra-individual variation of the effects of pulsed RF EMF exposure on the human sleep EEG.** *Bioelectromagnetics* [Epub ahead of print], 2015
- Lustenberger C, O'Gorman RL, Pugin F, Tüshaus L, Wehrle F, Achermann P, Huber R: → **Sleep spindles are related to schizotypal personality traits and thalamic glutamine/glutamate in healthy subjects.** *Schizophr Bull* 41(2): 522-31, 2015

- Macauda G, Bertolini G, Palla A, Straumann D, Brugger P, Lenggenhager B: → **Binding body and self in visuo-vestibular conflicts**. *Eur J Neurosci* 41(6): 810-7, 2015
- Müller-Edenborn B, Frick R, Piegeler T, Schläpfer M, Roth-Z'graggen B, Schlicker A, Beck-Schimmer B: → **Volatile anaesthetics reduce neutrophil inflammatory response by interfering with CXCR2 signaling**. *Br J Anaesth* 114(1): 143-9, 2015
- Ostergaard L, Rudiger A, Wellmann S, Gammella E, Beck-Schimmer B, Struck J, Maggiorini M, Gassmann M: → **Arginine-vasopressin marker copeptin is a sensitive plasma surrogate of hypoxic exposure**. *Hypoxia* 2: 143-151, 2014
- Osto E, Doycheva P, Corteville C, Bueter M, Doerig C, Stivala S, Buhmann H, Colin S, Rohrer L, Hasballa R, Tailleux A, Wolf- rum C, Tona F, Manz J, Vetter D, Spliethoff K, Vanhoutte PM, Landmesser U, Pattou F, Staels B, Matter CM, Lutz TA, Luescher TF: → **Rapid and body weight-independent improvement of endothelial function and HDL properties after Roux-en-Y gastric bypass: role of glucagon-like peptide-1**. *Circulation* 131(10): 871-81, 2015
- Othman A, Bianchi R, Alecu I, Wei Y, Porretta-Serapiglia C, Lombardi R, Chiorazzi A, Meregalli C, Oggioni N, Cavaletti G, Lauria G, von Eckardstein A, Hornemann T: → **Lowering plasma 1-deoxysphingolipids improves neuropathy in diabetic rats**. *Diabetes* 64(3): 1035-45, 2015
- Othman A, Saely CH, Muendlein A, Vonbank A, Drexel H, von Eckardstein A, Hornemann T: → **Plasma C20-Sphingolipids predict cardiovascular events independently from conventional cardiovascular risk factors in patients undergoing coronary angiography**. *Atherosclerosis* [Epub ahead of print], 2015
- Paulsen K, Tauber S, Dumrese C, Bradacs G, Simmet DM, Gözl N, Hauschild S, Raig C, Engeli S, Gutewort A, Hürlimann E, Biskup J, Unverdorben F, Rieder G, Hofmänner D, Mutschler L, Krammer S, Butttron I, Philpot C, Hüge A, Lier H, Barz I, Engelmann F, Layer LE, Thiel CS, Ullrich O: → **Regulation of ICAM-1 in Cells of the Monocyte/Macrophage System in Microgravity**. *Biomed Res Int* 2015: 538786, 2015
- Siebenmann C, Cathomen A, Hug M, Keiser S, Lundby AK, Hilty MP, Goetze JP, Rasmussen P, Lundby C: → **Hemoglobin mass and intravascular volume kinetics during and after exposure to 3,454 m altitude**. *J Appl Physiol* [Epub ahead of print], 2015
- Siebenmann C, Rasmussen P, Sørensen H, Zaar M, Hvidtfeldt M, Pichon A, Secher NH, Lundby C: → **Cardiac output during exercise: A comparison of four methods**. *Scand J Med Sci Sports* 25(1): e20-7, 2015
- Spalinger MR, Kasper S, Chassard C, Rastelli T, Frey-Wagner I, Gottier C, Lang S, Atrott K, Vavricka SR, Mair F, Becher B, Lacroix C, Fried M, Rogler G, Scharl M: → **PTPN2 controls differentiation of CD4+ T cells and limits intestinal inflammation and intestinal dysbiosis**. *Mucosal Immunol* [Epub ahead of print], 2014
- Späti J, Hänggi J, Doerig N, Ernst J, Sambatano F, Brakowski J, Jäncke L, Grosse Holtforth M, Seifritz E, Spinelli S: → **Pre-frontal thinning affects functional connectivity and regional homogeneity of the anterior cingulate cortex in depression**. *Neuropsychopharmacology* [Epub ahead of print], 2015
- Stadelmann K, Latshang TD, Lo Cascio CM, Clark RA, Huber R, Kohler M, Achermann P, Bloch KE: → **Impaired postural control in healthy men at moderate altitude (1630 m and 2590 m): data from a randomized trial**. *PLoS One* 10(2): e0116695, 2015
- Stadelmann K, Latshang TD, Nussbaumer-Ochsner Y, Tarokh L, Ulrich S, Kohler M, Bloch KE, Achermann P: → **Impact of acetazolamide and CPAP on cortical activity in obstructive sleep apnea patients**. *PLoS One* 9(4): e93931, 2014
- Tauber S, Hauschild S, Paulsen K, Gutewort A, Raig C, Hürlimann E, Biskup J, Philpot C, Lier H, Engelmann F, Pantaleo A, Cogoli A, Pippia P, Layer LE, Thiel CS, Ullrich O: → **Signal transduction in primary human T lymphocytes in altered gravity during parabolic flight and clinostat experiments**. *Cell Physiol Biochem* 35(3): 1034-51, 2015
- Tesler N, Latshang TD, Lo Cascio CM, Stadelmann K, Stoewhas AC, Kohler M, Bloch KE, Achermann P, Huber R: → **Ascent to moderate altitude impairs overnight memory improvements**. *Physiol Behav* 139: 121-6, 2015
- Thiel CS, Hauschild S, Tauber S, Paulsen K, Raig C, Raem A, Biskup J, Gutewort A, Hürlimann E, Unverdorben F, Butttron I, Lauber B, Philpot C, Lier H, Engelmann F, Layer LE, Ullrich O: → **Identification of Reference Genes in Human Myelomonocytic Cells for Gene Expression Studies in Altered Gravity**. *Biomed Res Int* 2015: 363575, 2015
- Vallelian F, Deuel JW, Opitz L, Schaer CA, Puglia M, Lönn M, Engelsberger W, Schauer S, Karnaukhova E, Spahn DR, Stocker R, Buehler PW, Schaer DJ: → **Proteasome inhibition and oxidative reactions disrupt cellular homeostasis during heme stress**. *Cell Death Differ* 22(4): 597-611, 2015
- Vuille-Dit-Bille RN, Camargo SM, Emmenegger L, Sasse T, Kummer E, Jando J, Hamie QM, Meier CF, Hunziker S, Forras-Kaufmann Z, Kuyumcu S, Fox M, Schwizer W, Fried M, Lindenmeyer M, Götze O, Verrey F: → **Human intestine luminal ACE2 and amino acid transporter expression increased by ACE-inhibitors**. *Amino Acids* [Epub ahead of print], 2014
- Wellmann S, Benzing J, Fleischlin S, Morgenthaler N, Fouzas S, Bühner CA, Szinnai G, Burkhardt T, Lapaire O: → **Cardiovascular biomarkers in preeclampsia at triage**. *Fetal Diagn Ther* 36(3): 202-7, 2014
- Wöhr M, Orduz D, Gregory P, Moreno H, Khan U, Vörckel KJ, Wolfer DP, Welzl H, Gall D, Schiffmann SN, Schwaller B: → **Lack of parvalbumin in mice leads to behavioral deficits relevant to all human autism core symptoms and related neural morphofunctional abnormalities**. *Transl Psychiatry* 5: e525, 2015
- Wüthrich TU, Marty J, Benaglia P, Eichenberger PA, Spengler CM: → **Acute Effects of a Respiratory Sprint-Interval Session on Muscle Contractility**. *Med Sci Sports Exerc* [Epub ahead of print], 2015
- Wüthrich TU, Marty J, Kerherve H, Millet GY, Verges S, Spengler CM: → **Aspects of respiratory muscle fatigue in a mountain ultramarathon race**. *Med Sci Sports Exerc* 47(3): 519-27, 2015