



ZIHP *News*

Zurich Center for Integrative Human Physiology

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Walking a fine line: personalized medicine between potential and threat



Jenny Ann Kürth

Genetic testing and personalized medicine can have a huge potential for diagnostics and the development of new drugs. On the other hand it needs to be highly regulated to protect the public from the misuse by third parties. This was one of the central statements of Dr. Thomas Binz from the Federal Office of Public Health in Bern. He was one of the local speakers of the new lecture series → «**Vision 2020 – A personal perspective**», organized by a committee of PhD students of the → **PhD Program in Integrative Molecular Medicine (imMed)** and supported by the SUK Program «Doktoratsprogramme».

But also at the international level regulations have to be defined. To protect the population from yet to be discovered risks the responsible institutions within the European Union formulate a broad and tightly interconnected framework regarding the market release of medicinal products, reported Dr. Cristina Maria Galli. She works at the Istituto Superiore di Sanità in Rome and is an expert in the pharmaceutical regulatory field.

Beside all regulatory aspects personalized medicine should also be considered in relation to the genetic pool of a population. External factors, for example from the environment, can lead to genetic alterations. «Thus personalized treatment applicable in Europe might not have the same effect in Asia or America», stated Dr. Lluís Quintana-Murci from the Pasteur Institute in Paris.

Given the therapeutic applications, cancer therapy is certainly a field that builds great hopes on personalized medicine. Prof. Dario Neri from the ETH Zurich developed antibody-based treatments that were

already moved to phase I and II medical trials. Nevertheless, Neri emphasized in a crowded lecture room: «It makes little sense to pursue personalized medicine approaches if there is not at least a small portion of patients with a strong therapeutic benefit.» With this statement he pointed to the struggles personalized medicine has to face.

The story of success will be continued with the next series of the Vision 2020 talks. → «**Functional Food – Food and Health**» starts on Monday, April 29, 2013 with Prof. Liisa Lähteenmäki from University of Aarhus in Denmark.

VISION 2020 – A PERSONAL PERSPECTIVE
FUNCTIONAL FOOD – FOOD AND HEALTH

Monday, April 29, 2013, 17:00h
Lecture Hall Y16 G15
University of Zurich, Irchel Campus
Prof. Liisa Lähteenmäki
Department of Business Administration
Aarhus University, Aarhus, Denmark

**Food, functions, health claims
and consumers**

Im Alter lernt das Gehirn anders



Was verändert sich im gesunden Gehirn mit dem Älterwerden? Kann man mit gezieltem Training einem Abbau der geistigen Leistung im Alter entgegenwirken? Diese Fragen beschäftigen viele Menschen, wie der grosse Andrang zum Vortrag von UZH-Professor Martin Meyer im Rahmen der Veranstaltungsreihe «Wissen-schaf(f)t Wissen» zeigte.

→ Lesen Sie den Artikel auf UZH News.

Events

April 19, 2013 - PhD Thesis Defense
→ [Analysis of mitochondrial function in mouse and man](#)
Robert A. Jacobs, Institute of Veterinary Physiology, UZH

April 23, 2013
→ [Anticancer vaccination](#)
Dr. Steve Pascolo, Klinik f. Onkologie, USZ

April 23, 2013
→ [Oxygen dependent regulation of the transmembrane adaptor protein PAG1](#)
Alexandra Schörg, Institute of Physiology, UZH

April 29, 2013
→ [Pancreatic stone protein - from an exotic protein to a predictor of sepsis](#)
Prof. Dr. Rolf Graf, Division of Visceral and Transplant Surgery, USZ

April 29, 2013
→ [Regulation of sodium and potassium homeostasis by the WNK kinases](#)
Dr. Juliette Hadchouel, National Institute of Health and Medical Research (INSERM), Paris, France

WISSEN-SCHAFT F WISSEN

Nächste Veranstaltungen

6. Mai 2013

→ [Amputationswunsch von gesunden Gliedern: Xenomelie oder wie das Gehirn den Körper wahrnimmt](#)

Prof. Peter Brugger, Leiter der Abteilung für Neuropsychologie am Universitätsspital Zürich

3. Juni 2013

→ [Der Schmerz: Alarm und Fehlalarm in unserem Körper](#)

Prof. Hanns Ulrich Zeilhofer, Institut für Pharmakologie und Toxikologie der Universität Zürich

In Zusammenarbeit mit dem Zentrum für Neurowissenschaften Zürich (ZNZ).

Jeweils montags von 18:00 - 19:30 Uhr
Eintritt frei!
UZH Zentrum, Hörsaal KOL-F-117

April 30, 2013 - ZIHP Lunch Seminar
→ [Mendelian randomization for testing the causality of cardiovascular risk factors](#)
Prof. Dr. Anne Tybjærg-Hansen, Department of Clinical Biochemistry, Rigshospitalet, Copenhagen University, Copenhagen, Denmark

May 6, 2013
→ [NF-kappaB in the Yin and Yang of the cellular response to heavy ion exposure](#)
PD Dr. Christine Hellweg, Radiation Biology, Institute of Aerospace Medicine, German Aerospace Center (DLR), Cologne, Germany

May 7, 2013
→ [Proteasomes in autoimmunology](#)
PD Dr. Eugen Feist, Department of Rheumatology and Clinical Immunology, Charité – Universitätsmedizin Berlin, Berlin, Deutschland

May 7, 2013
→ [Computational modeling of the oxygenation of the renal cortex](#)
Dr. Ufuk Olgac, Inst. of Physiology, UZH

New ZIHP member

→ Prof. Dr. Roland Martin, Department of Neurology, USZ as full member

Versuchspersonen gesucht: Wachheit

Für eine Untersuchung der Wachheit (Vigilanz) während einer Schlafentzugsperiode werden gesunde, männliche Versuchspersonen gesucht.

→ [Weitere Informationen](#)

Versuchspersonen gesucht: Ausdauertraining

Für eine Studie, die den Einfluss von Ausdauertraining auf die Muskelfunktion und die Muskelstruktur von Patienten mit mitochondrialen Muskelerkrankungen untersucht, werden gesunde Probanden gesucht.

→ [Weitere Informationen](#)

May 7, 2013
→ [CareerStart2013 medAlumni UZH](#)

May 13, 2013
→ [Cell and tissue turnover in humans in health and disease](#)
Prof. Dr. Kirsty Spalding, Department of Cell and Molecular Biology, Karolinska Institute, Stockholm, Sweden

May 13, 2013
→ [Genetics and molecular pathways of calcium regulation](#)
Rajesh V. Thakker, Academic Endocrine Unit, University of Oxford, Churchill Hospital Headington, Oxford, UK

May 14, 2013 - ZIHP Lunch Seminar
→ [Strategies for identification and follow-up of complex disease risk genes](#)
Prof. Dr. Anna Köttgen, Division of Nephrology, University of Freiburg, Germany and Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, USA

Press review

→ Für Autofahrer über 80 Jahre steigt das Unfallrisiko stark an

Autofahrerinnen und Autofahrer über 80 Jahre verfügen über das höchste Unfallrisiko. Forschende der Universität Zürich um das ZIHP-Mitglied Lutz Jäncke schlagen deshalb ein Fahrtraining vor, denn die Fahrsicherheit lässt sich auch im hohen Alter wieder auffrischen. Medienmitteilung der UZH, 12. April 2013

→ Ötzi hatte schlechte Zähne

Erstmals haben Forschende um das ZIHP-Mitglied Frank Rühli vom Zentrum für Evolutionäre Medizin der Universität Zürich gemeinsam mit ausländischen Kollegen an der Mumie Ötzi Paradontitis, Karies und unfallbedingte Zahnverletzungen nachweisen können. Medienmitteilung der UZH, 9. 4. 2013

→ «Vom Arbeitslosen bis zum Unternehmer»

Kokain in allen Schichten, Volkdroge Cannabis: Der Psychopharmakologe und ZIHP-Forscher Boris Quednow analysiert die Vorlieben der Schweizer Drogenkonsumenten. Tages-Anzeiger, 9. April 2013

→ Erfolgsgeschichte wird fortgesetzt

An einer Auftaktveranstaltung wurden die 8 neuen Universitären Forschungsschwerpunkte vorgestellt. Das letzte Wort hatte Max Gassmann, der als Leiter des Schwerpunktes Integrative Humanphysiologie auf langjährige Erfahrungen innerhalb eines UFSP zurückblicken kann. UZH News, 3. April 2013

Imprint

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Recent publications

Biason-Lauber A, Böni-Schnetzler M, Hubbard BP, Bouzakri K, Brunner A, Cavelti-Weder C, Keller C, Meyer-Böni M, Meier DT, Brorsson C, Timper K, Leibowitz G, Patrignani A, Bruggmann R, Boily G, Zulewski H, Geier A, Cermak JM, Elliott P, Ellis JL, Westphal C, Knobel U, Eloranta JJ, Kerr-Conte J, Pattou F, Konrad D, Matter CM, Fontana A, Rogler G, Schlapbach R, Regairaz C, Carballido JM, Glaser B, McBurney MW, Pociot F, Sinclair DA, Donath MY: → **Identification of a SIRT1 Mutation in a Family with Type 1 Diabetes**. *Cell Metab* 17(3): 448-55, 2013

Biber J, Hernando N, Forster I: → **Phosphate transporters and their function**. *Annu Rev Physiol* 75: 535-50, 2013

Bosch OG, Wagner M, Jessen F, Kühn KU, Joe A, Seifritz E, Maier W, Biersack HJ, Quednow BB: → **Verbal Memory Deficits Are Correlated with Prefrontal Hypometabolism in 18 FDG PET of Recreational MDMA Users**. *PLoS One* 8(4): e61234, 2013

Huber-Reggi SP, Mueller KP, Neuhaus SC: → **Analysis of optokinetic response in zebrafish by computer-based eye tracking**. *Methods Mol Biol* 935: 139-60, 2013

Klein K, Gay S: → **Epigenetic modifications in rheumatoid arthritis, a review**. *Curr Opin Pharmacol* [Epub ahead of print], 2013

Mohebbi N, Perna A, van der Wijst J, Becker HM, Capasso G, Wagner CA: → **Regulation of two renal chloride transporters, AE1 and pendrin, by electrolytes and aldosterone**. *PLoS One* 8(1): e55286, 2013

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Trenkmann M, Brock M, Gay RE, Michel BA, Gay S, Huber LC: → **Tumor Necrosis Factor α -Induced MicroRNA-18a Activates Rheumatoid Arthritis Synovial Fibroblasts Through a Feedback Loop in NF- κ B Signaling**. *Arthritis Rheum* 65(4): 916-27, 2013

Wild PJ, Ikenberg K, Fuchs TJ, Rechsteiner M, Georgiev S, Fankhauser N, Noske A, Roessle M, Caduff R, Dellas A, Fink D, Moch H, Krek W, Frew IJ: → **p53 suppresses type II endometrial carcinomas in mice and governs endometrial tumour aggressiveness in humans**. *EMBO Mol Med* 4(8): 808-24, 2012

Zorina OI, Haueis P, Greil W, Grohmann R, Kullak-Ublick GA, Russmann S: → **Comparative Performance of Two Drug Interaction Screening Programmes Analysing a Cross-Sectional Prescription Dataset of 84,625 Psychiatric Inpatients**. *Drug Saf* 36(4): 247-58, 2013

Züger D, Forster K, Lutz TA, Riediger T: → **Amylin and GLP-1 target different populations of area postrema neurons that are both modulated by nutrient stimuli**. *Physiol Behav* 112-113(15): 61-69, 2013

