



ZIHP News

Zurich Center for Integrative Human Physiology

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Donate an organ to Curate: A contemporary science-art installation

Marta Figueiredo

One of the frequent misunderstandings that most of us share is that science and art have little in common. Our modern education system has contributed to this misunderstanding by separating the arts and sciences fields of study. Exposing cross-disciplinary collaborations early in life can provide necessary tools for creative problem solving and out-of-the-box thinking. One need not look far back in history to discover that - while artists are a creative bunch - their ideas were often influenced by the emergence of science. For example, Michelangelo's sculptures were inspired by his anatomical studies of human cadavers.

Science Xplore as a platform for collaborative projects

At Science Xplore we envisioned a platform to facilitate researchers and artists from diverse fields to discuss, collaborate and explore together. The concept for Science Xplore was formulated in 2014 by the founders Dr. Shiva Tyagarajan, a researcher at the University of Zurich, Marta Figueiredo, who recently defended her PhD thesis in integrative molecular medicine,



Prof. Jean-Marc Fritschy, director of the Center of Neuroscience in Zurich and Vice Dean of research at the University of Zurich, and Dr. Patrizia Panzanelli, teacher and lecturer at the University of Turin, Italy. In March 2015, Science Xplore was formally launched as a non-profit association for creative science outreach. Since then, Science Xplore brings together scientists and artists to collaborate on scientific concepts. We organize very popular ART LAB events on a specific topic, inviting artists and scientists to collaborate and perform hands-on science and art projects with high school students. At the end of each ART LAB event, students weave their science projects into a theme-based story using art as a tool. Hence, science and art are integral components of

Science Xplore and its activities. So far, we organized the ART LAB events in Viseu, Portugal, but we are planning to launch them in Switzerland, too.

A science-art installation at the MANIFESTA 11

This year, Science Xplore additionally participated in the ongoing MANIFESTA 11, and organized a science-art installation in collaboration with Zürcher Hochschule der Künste (ZHDK). MANIFESTA is a roving European biennial that explores and reflects on emergent developments in contemporary art.



One aspect of contemporary art is to make subjects an integral part of the installation itself, rather than being passive observers. Moreover, contemporary art takes everyday situations and forces participants to pause

and reflect; and perhaps, to spark new interpretive ideas in the process. During MANIFESTA 11, several parallel events are organized. We participated at an event on the topic «DONATE to CURATE - What People do for less or no Money».

Reflecting about organ donation

On June 25, 2016 Marta and Shiva, co-founders of Science Xplore, teamed up with sound artist Kaspar König from the Zürcher Hochschule der Künste (ZHDK) and prepared a science-art installation on organ donation. In this installation, participants entered a structure similar to a war/relief aid tent, where they were received by staff dressed up as medical personnel. The staff acquainted

the subjects to basic information on organ donation. Further, models of various organs commonly donated were presented to the participants to touch, feel and reflect on the topic of organ donation. The Swiss statistics on organ donation, donor age groups, import and export of organs were also presented and discussed with the participants. Once the participants were introduced to the topic, they were presented with a surgical gown and asked to lay down on a stretcher. After being blindfolded, participants were provided with headphones to listen to the inner works of organs and the surgical procedure during an organ transplantation.

Why organ donation? Organs per-

form vital functions for our physical well being, yet we take our organs for granted until one day when they stop functioning properly. Simple altruistic acts from common people save millions of lives all over the world. Some people make a difference not with money, but by donating their organs after they are dead, or sometimes even when they are alive. With this installation, Science Xplore used art to explain science to a broad audience. The emotions generated within the participants allowed them to reflect about the emotional component associated with organ donation.

For more information about Science Xplore and its activities, visit
[→ www.sciencexplore.org](http://www.sciencexplore.org).

Marta Figueiredo is co-founder of Science Xplore and alumna of the imMed PhD Program

12th ZIHP Symposium: August 26, 2016

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.

Cash prizes will be awarded for the best presentation and the best posters.

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

→ [Website and program of the symposium](#)

Deadline for → [registration](#) is Friday, August 3, 2016.

Keynote and special lectures

Keynote lectures

→ Prof. Dr. Joerg Heeren, Institute for Biochemistry and Molecular Cell Biology, University Medical Center Hamburg-Eppendorf, Germany

The relevance of brown adipose tissue for metabolic health

→ Prof. Dr. Ruedi Aebersold

Institute of Molecular Systems Biology, ETH

Proteomic variability: measurement and phenotypic consequences



→ Dr. Matthias Kaiserswerth,
 Former Director, IBM Research – Zurich

The new era of Cognitive Computing: Smart Machines

Special section

From academia to spin-off

→ Dr. David Fluri, InSphero AG, Schlieren

→ Prof. Dr. Emanuela Keller, NeMoDevices – Insights inside the brain, Zurich

Farewell lectures of ZIHP assistant professors

→ Prof. Dr. Ian Frew, Institute of Physiology, UZH

Interplay between HIF-alpha transcription factors, primary cilia and cell cycle tumour suppressor genes in clear cell renal cell carcinoma

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

What did we achieve in those years?

Concluding remarks

→ Prof. Dr. Alan N. Schechter, Molecular Medicine Branch, NIDDK, National Institutes of Health, Maryland, USA

Member of the ZIHP Advisory Board

The future of integrative and translational research

Die Frühlingsausgabe von WISSEN-SCHAFT WISSEN



→ Exotische Mücken in mitteleuropäischen Breiten

Stechmücken verderben warme Sommerabende. Sind die Stiche aber auch gefährlich? Müssen wir uns sorgen und wie können wir uns schützen? Alexander Mathis, Parasitologe an der UZH, klärte diese Fragen.



→ «Gesunde Bräune gibt es nicht»

Die Sonnenstrahlung verursacht viele Hautschäden. Wie schützt man sich am besten, um den Aufenthalt im Freien geniessen zu können? Professor Stephan Lautenschlager erläuterte welche Wirkung Schatten, Textilien und Sonnencremes wirklich haben.



→ Krebstherapie für Vierbeiner

Krebs gehört zu den Haupttodesursachen bei Haustieren. In der Veterinärmedizin stehen heute modernste Technologien für Diagnose und Therapie zur Verfügung. Carla Rohrer Bley, Leiterin Onkologie am Zürcher Tierspital, berichtete wann deren Anwendung sinnvoll ist.



→ Wie Darmbakterien vor Krankheiten schützen

Im Verdauungstrakt des Menschen leben Billionen von Bakterien. Gerhard Rogler, Gastroenterologe und UZH-Professor, erklärte weshalb eine möglichst grosse Vielfalt an Darmbakterien der Gesundheit zuträglich ist.

Vorankündigung der Herbstausgabe

Entwicklung von Jung bis Alt

3. Oktober 2016

Altersforschung und neurodegenerative Erkrankungen

Prof. Dr. med. Roger Nitsch

Institut für Regenerative Medizin, UZH

14. November 2016

Die kindliche Entwicklung

Prof. Dr. med. Oskar Jenni

Entwicklungspädiatrie, Kinderspital

Zürich

Congratulations!

ZIHP-Mitglied Prof. Dr. Simon Hoerstrup wurde zum → ordentlichen Professor für Regenerative Medizin ernannt. Simon Hoerstrup ist seit 2004 Leiter des Forschungsbereichs Herz- und Gefässchirurgie am USZ. 2008 wurde er zum ausserordentlichen Professor ad personam für Experimentelle Chirurgie an der UZH ernannt.

ZIHP-Mitglied Prof. Dr. Matthias R. Baumgartner wurde auf den 1. August 2016 zum → ordentlichen Professor für Stoffwechselkrankheiten befördert. Matthias Baumgartner ist seit 2008 als ausserordentlicher Professor an der UZH tätig.

ZIHP Mitglied Prof. Dr. Malcolm Kohler wurde auf den 1. März 2016 zum → ordentlichen Professor für Pneumologie befördert. Malcolm Kohler ist seit 2013 ausserordentlicher Professor an der UZH und Direktor der Klinik für Pneumologie am USZ.

ZIHP Mitglied Prof. Dr. Daniel Konrad wurde auf den 1. August 2016 zum → ausserordentlichen Professor ad personam für Pädiatrische Endokrinologie und Diabetologie ernannt. Seit 2003 ist Daniel Konrad an der Abteilung für Pädiatrische Endokrinologie und Diabetologie des Kinderspitals Zürich tätig, seit 2015 als deren Leiter. Seit 2012 ist er Titularprofessor der UZH für Pädiatrische Endokrinologie.

ZIHP-Mitglied Prof. Dr. Beatrice Beck Schimmer, wurde auf den 1. August 2016 zur → ordentlichen Professorin ad personam für Anästhesiologie befördert. Beatrice Beck Schimmer ist seit 2009 als ausserordentliche Professorin ad personam für Anästhesiologie an der UZH tätig.

UZH-Professor und ZIHP-Forscher Lawrence Rajendran wurde für seine Forschung zu Alzheimer mit dem → 3. SCOR European Grand Prize for Young Researcher ausgezeichnet.

Press review

→ Stillen: Was Muttermilch so besonders macht

Muttermilch ist die erste Nahrung vieler Babys, dient aber nicht nur als Energielieferant. Nach und nach finden Forscher wie ZIHP-Mitglieder Thierry Hennet und Lubor Borsig heraus, wie wertvoll sie wirklich ist.

Spiegel, 20. April 2016

→ The unique biology of human breast milk

Humans may have the most complex breast milk of all mammals. A review of what is known and the different jobs of human breast milk appears April 19 in Trends in Biochemical Sciences.

Cell Press, Public Release, April 19, 2016

→ Zu kurze Darmspiegelungen

Darmkrebs ist in der Schweiz die dritthäufigste Krebsart. Eine neue Studie von Forschern um ZIHP-Mitglied Stephan Vavricka zeigt, wie einfach viele Fälle verhindert werden könnten.

Tages-Anzeiger, 1. März 2016

→ Neuer Wirkstoff blockiert Alzheimer-Enzym

Forscher um ZIHP-Mitglied Lawrence Rajendran haben eine Möglichkeit gefunden, ein an der Alzheimer Entstehung beteiligtes Enzym gezielt zu hemmen. Da nur schädliche Prozesse blockiert werden und wichtige Funktionen erhalten bleiben, macht dies Hoffnung auf neue Medikamente ohne schwere Nebenwirkungen.

SRF Puls, 25. Februar 2016

Events supported by the ZIHP

August 26, 2016

→ 12th ZIHP Symposium

September 4 - 7, 2016

→ 2nd European Meeting on Phototransduction

Monte Verità Conference Centre, Ascona

September 24 - 28, 2016

Cardio-Pulmonary Acclimatization and Adaptation to High Altitude: from Physiology to Clinical Practice

5th International Issyk Kul - Leh Symposium,
Issyk Kul Lake, Kyrgyzstan

October 21/22, 2016

→ Second Swiss parabolic flight

Further events will be organized. An updated list can be found on our website: → www.zihp.uzh.ch/en/events.html

→ Exaktere Analyse der Zellreaktionen auf Stress

Stress in den Zellen des Körpers sind sowohl Ursache als auch Konsequenz von Entzündungskrankheiten oder Krebs. Die Zellen reagieren auf diesen Stress, um sich vor Schädigungen zu schützen. Forschende um ZIHP-Mitglied Michael Hottiger haben nun ein neues Verfahren entwickelt, mit der sich eine elementare Stressantwort viel detaillierter als bisher untersuchen lässt: die ADP-Ribosylierung des Chromatins. Langfristig soll diese Methode helfen, krankmachende Prozesse zu unterbinden.

UZH Medienmitteilung, 8. Februar 2016

→ Mit Mathematik gegen Depression

Forscher um ZIHP-Mitglied Klaas Enno Stephan versuchen, psychische Krankheiten wie Depression mit Datenanalyse besser zu verstehen. Neuromodeling heisst der neue Ansatz, der Medizin mit Mathematik kombiniert.

Tages-Anzeiger, 20. Dezember 2015

Recent publications

A list of publications of all ZIHP members can be found on our website

→ www.zihp.uzh.ch/en/research/publications.html

From the editor's desk

A very warm welcome to our new
Scientific Coordinator
Dr. Helen Becker!



imMed PhD Program

New students

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

Bjelopoljak, Nadia, Institute of Food, Nutrition and Health, ETH
Ciullo Alessandra, Center for Molecular Cardiology, UZH
Dedual Mara, Division of Endocrinology and Diabetology, USZ
Deplazes Sereina, Division of Metabolism, University Children's Hospital Zurich
Ghazi Susan, Institute of Anatomy, UZH
Hasler Tobias, Institute of Physiology, UZH
Hering Larissa, Division of Gastroenterology and Hepatology, USZ
Michalak Katarzyna, University Children's Hospital Zurich
Pianecci Enea, Center for Molecular Cardiology, UZH
Kappler Katharina, Institute of Physiology, UZH
Moelijker Nynke, Institute of Veterinary Physiology, UZH
Potapenko Anton, Institute of Clinical Chemistry, USZ
Rajendran Anarudha, Institute of Physiology, UZH
Ruiz Serrano Amalia, Institute of Physiology, UZH
Salzmann Andrea, Institute of Forensic Medicine, UZH
Schiano Guglielmo, Institute of Physiology, UZH
Schneider Marcel André, Division of Visceral & Transplant Surgery Research, USZ
Taheri Amy, Center of Molecular Cardiology, UZH
Viecelli Claudio, Balgrist University Hospital Zurich
Yalcinkaya Mustafa, Institute of Clinical Chemistry, USZ

New open PhD positions

→ Energy metabolism in the retina: two-photon microscopy-based imaging of ATP in retinal neurons in health and disease
Dept. of Ophthalmology, USZ

→ Bacterial proteases fooling human protease sensors, the protease activated receptors
Surgical Intensive Care, USZ

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

→ Investigating novel mechanisms of kidney disease in HIV-infected patients
Institute of Anatomy, UZH

→ To identify disease-relevant epigenetic targets for the development of novel therapeutic strategies for the Complex regional pain syndrome (CRPS) and Osteoarthritis
Department of Rheumatology, USZ

→ Analysis of renal erythropoietin producing cells
Institute of Physiology, UZH

→ Hormonal control of myokine secretion in skeletal muscle by microRNA
Dept. of Diabetology, Endocrinology and Clinical Nutrition, USZ

→ Sex Hormones and Vasculogenesis/ Angiogenesis: Role of Micro RNA?
Div. of Reproductive Endocrinology, UZH

→ Role of novel hypoxia-inducible molecules in the remodeling process of the pulmonary vasculature
Inst. of Veterinary Physiology, UZH and Division of Pulmonology, USZ

→ Additive manufacturing of bone substitutes and epigenetics
Center of Dentistry/MKG, Oral Biotechnology & Bioengineering, UZH

Vision 2020

Current topic : → «Genetic testing»

July 28, 2016

→ Genetic testing in humans – the hype of precision medicine

Prof. Dr. Sabina Gallati, University of Bern

September 1, 2016

Title to be announced

Dr. Gioia Althoff, Sophia Genetics, France & Switzerland

Topic autumn semester 2016 : «Tissue engineering»

Imprint

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