



17-19 February 2021, Afternoon Online Meeting

LS²
Life Sciences Switzerland

LS² Annual Meeting 2021

Mechanisms in health, disease and ageing

annual-meeting.ls2.ch

e-Posters

The list is organized by first category and then alphabetically.

The abstracts will be available only to registered participants on the poster gallery of the virtual platform. Only the abstracts of authors who gave the permission to be published will be available on the virtual platform.

Session

Poster's Number

e-poster session 1:

Wednesday 17 February 2021. 16:05 – 16:50 (CET)

1 - 5 / 40 - 54

e-poster session 2:

Thursday 18 February 2021. 14:35 – 15:35 (CET)

13–25 / 29– 31 / 55–59 / 63-75

e-poster session 3:

Friday 19 February 2021. 15:20 – 16:00 (CET)

6-12 / 26-28 / 32-39 / 60-62

First Category	Poster number	Session
Ageing	1-5	Session 1 - Wednesday
Autophagy	6-8	Session 3 - Friday
Biochemistry	9-11	Session 3 - Friday
Bioinformatics	12	Session 3 - Friday
Biophysics	13-16	Session 2 - Thursday
Cancer Biology	17-25	Session 2 - Thursday
Cardiovascular Biology	26-28	Session 3 - Friday
Chemical Biology	29-31	Session 2 - Thursday
Computational Biology	32	Session 3 - Friday
Drug Discovery	33-35	Session 3 - Friday
Genetics	36	Session 3 - Friday
Microbiology	37	Session 3 - Friday
Microscopy	38-39	Session 3 - Friday
Molecular and Cellular Biosciences	40-54	Session 1 - Wednesday
Neurosciences	55-59	Session 2 - Thursday
Pharmacology	60-62	Session 3 - Friday
Physiology	63-71	Session 2 - Thursday
Precision Medicine	72	Session 2 - Thursday
Structural Biology	73	Session 2 - Thursday
Systems Biology	74-75	Session 2 - Thursday

1**Ageing**Secondary category, if any: **Molecular and Cellular Biosciences**Other category, if any: **Bioinformatics****Impact of genome folding on C. elegans lifespan****Das, Moushumi***Moushumi Das (1)°, Jennifer Isabel Semple (1)°, Todor Gitchev (1)°, Julie Campos (1)°, Cyril Statzer (2)°, Collin Ewald (2)°, Amin Allahyar (3)°, Jeroen de Ridder (3)°, Peter Meister (1)***(1) University of Bern**(2) ETH Zürich**(3) Utrecht University***2****Ageing**Secondary category, if any: **Physiology**

Other category, if any:

Detrimental effects of chronic L-arginine rich food on aging kidney**Huang, Ji***Ji Huang (1)°, Diogo Ladeiras (1)°, Yi Yu (1), Xiu-fen Ming (1), Zhihong Yang (1)***(1) Department of Endocrinology, Metabolism, and Cardiovascular System, Faculty of Science and Medicine, University of Fribourg***3****Ageing**Secondary category, if any: **Physiology**

Other category, if any:

Sestrin is a key regulator of stem cell function and lifespan in response to dietary amino acids**Lu, Jiongming***Jiongming Lu (1)°, Ulrike Temp (1)°, Andrea Müller-Hartmann (1)°, Jacqueline Esser (1)°, Sebastian Grönke (1)*, Linda Partridge (1)***(1) Max Planck Institute for Biology of Ageing***4****Ageing**Secondary category, if any: **Cardiovascular Biology**

Other category, if any:

Arg-II deficiency protects against cardiac aging**Potenza, Duilio Michele***Duilio Michele Potenza (1), Guillaume Ajalbert (1), Marie-Noelle Giraud (2), Aurelien Frobert (2), Stephane Cook (2), Xiu-Fen Ming (1), Zhihong Yang (1)***(1) Faculty of Science and Medicine, University of Fribourg, Cardiovascular and Aging Research, EMC department**(2) Faculty of Science and Medicine, University of Fribourg, Cardiology, EMC department***5****Ageing**Secondary category, if any: **Cardiovascular Biology**Other category, if any: **Vascular stiffness****Therapeutic MMP-2 knockdown blunts age-dependent carotid stiffness by decreasing elastin degradation and augmenting endothelial nitric oxide synthase activation****Puspitasari, Yustina Maria***Yustina M Puspitasari (1), Candela Diaz-Canestro (1), Luca Liberale (1)°, Tomasz J Guzik (2)°, Andreas Flammer (3)°, Nicole R Bonetti (1)°, Patricia Wuest (4)°, Sarah Constantino (1)°, Francesco Paneni (4)°, Alexander Akhmedov (1)°, Jurg H Beer (4)°, Frank Ruschitzka (3)°, Matthias Hermann (3)°, Thomas F Luscher (1)°, Isabella Sudano (3)°, Giovanni G Camici (1)***(1) University of Zurich, Center for Molecular Cardiology**(2) University of Glasgow, Institute of Cardiovascular and Medical Science**(3) University Hospital Zurich, Department of Cardiology**(4) University of Zurich, Center for Molecular Cardiology***6****Autophagy**Secondary category, if any: **Cardiovascular Biology**

Other category, if any:

The role of autophagy in zebrafish cardiovascular regeneration**Chavez Rosas, Myra**

Myra N. Chavez (1), Rodrigo A. Morales (2)°, Camila Lopez-Crisoto (3)°, Juan Carlos Roa (4)°, Miguel Allende (5)°, Sergio Lavandero (3)*, Nadia Mercader (1)*
(1) University of Bern, Institute of Anatomy
(2) Karolinska Institutet, Department of Medicine
(3) Universidad de Chile, FONDAF Advanced Center for Chronic Diseases
(4) Pontificia Universidad Católica de Chile, 5 Dept. of Pathology
(5) Universidad de Chile, FONDAF Center for Genome Regulation

7

Autophagy

Secondary category, if any: Cancer Biology
Other category, if any: Migration and Invasion

Oncogene-induced autophagy enhances migration and invasion of breast and prostate cancer cells

Niklaus, Nicolas

Nicolas Niklaus (1), Igor Tokarchuk (1)°, Anna Bill (1)°, Magali Humbert (1)°, Ramin Rampour (2)°, Federico La Manna (2)°, Marianna Kruithof-de Julio (2)°, Bruce Torbett (3)°, Mario Tschan (1)*
(1) University of Bern, Institute of Pathology
(2) University of Bern, Department of Biomedical Research
(3) Scripps Research Institute, Department of Immunology and Microbiology

8

Autophagy

Secondary category, if any: Cancer Biology
Other category, if any: Acute Myeloid Leukemia

Linking lysosomes with chemotherapy resistance in acute myeloid leukemia

Rafiq, Sreoshee

Sreoshee Rafiq (1), Irene Mungure (2), Mario P. Tschan (1), Magali Humbert (2)*
(1) Graduate School for Cellular and Biomedical Sciences, University of Bern
(2) Institute of Pathology, University of Bern

9

Biochemistry

Secondary category, if any: Molecular and Cellular Biosciences
Other category, if any: Biophysics

Motor usage imprints microtubule stability in the shaft

Aumeier, Charlotte

Charlotte Aumeier (1)*
(1) University of Geneva, Biochemistry Department

10

Biochemistry

Secondary category, if any: Biophysics
Other category, if any:

VEGF and VEGFR2 binding to fibronectin

Mitsi, Maria

Maria Mitsi (1)*
(1) ETH Zurich

11

Biochemistry

Secondary category, if any: Physiology
Other category, if any:

The role of UNC93B1 as a chaperone for STIM1 and TLRs during immune cell signaling

Wang, Wen-An

Jennifer, Wen-An Wang (1)°, Nicolas Demaurex (1)*
(1) UNIGE, PHYM

12

Bioinformatics

Secondary category, if any: Structural Biology
Other category, if any: Pharmacology

Delineating FOR20[FOP-related protein of 20 kDa] Role in Microtubule Polymerization and its Differential Binding Affinities of Human Tubulin Isoforms α II, α III and α IV for DAMA-colchicine.

Narisetty, Madhansai

Madhansai Narisetty (1)^o, Ambarish Kunwar (2)*
(1) Eötvös Loránd University, Budapest, Hungary,
Institute of Biology, Department of Physiology and
Neurobiology, Eötvös Loránd
University, Budapest, Hungary
(2) Indian Institute of Technology-Bombay, Mumbai
, India, Department of Bioscience and Bioengineering,
Indian Institute of Technology-Bombay, Mumbai, India

13

Biophysics

Secondary category, if any:

Other category, if any: Theoretical modeling of
membranes

Phase separation in membranes due to matter exchange

Caballero, Nirvana

Nirvana Caballero (1), Karsten Kruse (2), Thierry
Giamarchi (1)
(1) University of Geneva, Department of Quantum
Matter Physics
(2) University of Geneva, Biochemistry Department

14

Biophysics

Secondary category, if any: Microscopy

Other category, if any:

Active regulation of the passive coupling between membrane tension and cell volume changes

Roffay, Chloé

Chloé Roffay (1), Kyoohyun Kim (2), Vincent Mercier (1),
Marta Urbanska (2), Stefan Matile (3), Jochen Guck (2),
Martin Lenz (4), Aurélien Roux*
(1) University of Geneva, Biochemistry
(2) Max Planck Institute for the Science of Light
(3) University of Geneva, Organic Chemistry
(4) Université Paris-Saclay, CNRS, LPTMS, France

15

Biophysics

Secondary category, if any: Chemical Biology

Other category, if any: Biochemistry

Development of a single-molecule approach to observe enzymatic dynamics of ubiquitination in chromatin regulation

Teslenko, Alexandra

Alexandra Teslenko (1), Beat Fierz (1)*
(1) EPFL, LCBM

16

Biophysics

Secondary category, if any: Molecular and Cellular
Biosciences

Other category, if any: Developmental biology

Cell fate coordinates mechano-osmotic forces in intestinal crypt formation

Yang, Qiutan

Qiutan Yang (1)^o, Prisca Liberali (1)^o
(1) Friedrich Miescher institute, Quantitative biology

17**Cancer Biology**

Secondary category, if any: **Physiology**
 Other category, if any:

Tristetraprolin in liver metabolic diseases and hepatocellular carcinoma**Dolicka, Dobrochna**

*Dobrochna Dolicka (1)[°], Cyril Sobolewski (1)[°], Monika Gjorgjieva (1), Marta Correia de Sousa (1), Flavien Berthou (1), Claudio De Vito (2), Didier J. Colin (3), Olivia Bejuy (3), Margot Fournier (1), Christine Maeder (1), Perry J. Blackshear (4), Laura Rubbia-Brandt (2), Michelangelo Foti (1)**

(1) University of Geneva, Faculty of Medicine, Department of Cell Physiology and Metabolism

(2) Geneva University Hospitals, Division of Clinical Pathology

(3) University of Geneva, Centre for Biomedical Imaging and Preclinical Imaging Platform

(4) National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina, US, Laboratory of Signal Transduction

18**Cancer Biology**

Secondary category, if any: **Pharmacology**
 Other category, if any: **Drug Discovery**

Investigating the efficacy and mechanism of action of a synergistic multi-drug combination known to prevent spindle clustering in complex colorectal carcinoma 3D models**Ducrey, Eloïse**

*Eloïse Ducrey (1,2,3), Romain Absolonne (1), Patrick Meraldi (3,4), Patrycja Nowak-Sliwinska (1,2,3)**

(1) Molecular Pharmacology Group, School of Pharmaceutical Sciences, University of Geneva, Switzerland

(2) Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, Switzerland

(3) Translational Research Center in Oncohaematology, Geneva, Switzerland

(4) Department of Cell Physiology and Metabolism, Faculty of Medicine, University of Geneva, Switzerland

19**Cancer Biology**

Secondary category, if any: **Physiology**
 Other category, if any:

P53 represses TRPM4 expression in HCT 116 colorectal cancer cell line**Kappel, Sven**

*Sven Kappel (1)[°], Daniela Ross-Kaschitzka (1)[°], Christine Peinelt (1)**

(1) University of Bern, Institute of Biochemistry and Molecular Medicine

20**Cancer Biology**

Secondary category, if any: **Autophagy**
 Other category, if any: **apoptosis**

Ibrutinib efficiency is improved in Diffuse Large B Cell lymphoma by inhibiting early-stage autophagy**Mandhair, Harpreet**

*Harpreet Mandhair (1)[°], Miroslav Arambasic (1)[°], Urban Novak (1)**

(1) University of Bern, Inselspital Bern, Department of BioMedical Research

21**Cancer Biology**

Secondary category, if any: **Systems Biology**
 Other category, if any:

Phenotypic search in tango with phosphoproteomic profiling of active kinases for optimization of drug cocktails for cancer treatment**Nowak-Sliwinska, Patrycja**

*Judy R van Beijnum (1), Andrea Weiss (2), Connie R Jimenez (1), Arjan W Griffioen (1), Patrycja Nowak-Sliwinska (2)**

(1) Vrije Universiteit Amsterdam, Department of Medical Oncology

(2) University of Geneva, School of Pharmaceutical Sciences

22**Cancer Biology**

Secondary category, if any: **Pharmacology**
 Other category, if any:

Employing complex 3D co-culture models and mathematical modeling to optimize multidrug combinations and boost colorectal carcinoma treatment

Ramzy, George

*George M. Ramzy (1), Sahar Boss (1)°, Patrycja Nowak-Sliwinska (1)**

(1) Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, 1211 Geneva, Switzerland, Molecular Pharmacology Group, School of Pharmaceutical Sciences, University of Geneva, 1211 Geneva, Switzerland.

23**Cancer Biology**

Secondary category, if any: **Pharmacology**
 Other category, if any: **Biochemistry**

Resistance to Sunitinib in clear cell renal cell carcinoma outsmarted by the optimized multi-drug combination

Rausch, Magdalena

*Magdalena Rausch (1), Léa Blanc (1)°, Céline Delucinge-Vivier (2)°, Mylène Docquier (2)°, Patrycja Nowak-Sliwinska (1)**

*(1) Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, Molecular Pharmacology Group, School of Pharmaceutical Sciences
 (2) University of Geneva, iGE3 Genomics Platform, Department of Genetics & Evolution*

24**Cancer Biology**

Secondary category, if any: **Molecular and Cellular Biosciences**
 Other category, if any:

Isoform specific roles of Hexokinase 2 and 3 in Energy Metabolism, Myeloid Differentiation and Cancer Development
Authors

Seiler, Kristina

*Kristina Seiler (1), Magali Humbert (1), Petra Minder (2), Iris Mashimo (2), Bruce E Torbett (3), Mario P Tschan (1)**

(1) University of Bern, Switzerland, Institute of Pathology

*(2) Scripps Research, La Jolla, USA, Department of Immunology and Microbiology
 (3) Seattle Children's Hospital, Seattle, USA, Center for Immunity and Immunotherapies*

25**Cancer Biology**

Secondary category, if any: **Autophagy**
 Other category, if any:

Reversing EMT in breast cancer cells by autophagy induction

Tokarchuk, Igor

*Igor Tokarchuk (1), Anna M. Schläfli (1), Mario P. Tschan (1)**

(1) Institute of Pathology, Bern, Experimental Pathology

26**Cardiovascular Biology**

Secondary category, if any:
 Other category, if any:

A Quantitative Analysis of Tissue Wall Thickness in Human Intracranial Aneurysms: The Swiss AneuX Study

Acosta, Jason M.

*Jason M. Acosta (1), Anne F. Cayron (1)°, Nicolas Dupuy (2)°, Eric Allémann (3)°, Philippe Bijlenga (2)°, Brenda R. Kwak (1)°, Sandrine Morel (1)**

*(1) Faculty of Medicine, University of Geneva, Department of Pathology and Immunology
 (2) Faculty of Medicine, Geneva University Hospitals and University of Geneva, Department of Clinical Neurosciences, Neurosurgery Division
 (3) University of Geneva, School of Pharmaceutical Sciences and Institute of Pharmaceutical Sciences of Western Switzerland*

27**Cardiovascular Biology**

Secondary category, if any:
 Other category, if any:

Primary cilia control endothelial permeability by regulating expression and location of junction proteins

Morel, Sandrine

*Mannekomba R. Diagbouga (1)°, Sandrine Morel (1)°, Anne Cayron (1)°, Julien Haemmerli (2)°, Marc Georges (2)°, Beerend P. Hierck (3)°, Sylvain Lemeille (1)°, Philippe Bijlenga (2)°, Brenda R. Kwak (1)**

(1) Faculty of Medicine, University of Geneva, Switzerland, Department of Pathology and Immunology
(2) Faculty of Medicine, Geneva University Hospitals and University of Geneva, Switzerland, Department of Clinical Neurosciences - Neurosurgery Division
(3) Leiden University Medical Center, the Netherlands, Department of Anatomy and Embryology

28

Cardiovascular Biology

Secondary category, if any:
Other category, if any: Cell communication

Deletion of Pannexin1 confers protection against cardiac ischemia-reperfusion injury

Rusiecka, Olga

Olga M Rusiecka (1), Sandrine Morel (1), Filippo Molica (1), Brenda R Kwak (1)
(1) University of Geneva, Geneva, Switzerland, Dept. Pathology & Immunology,

29

Chemical Biology

Secondary category, if any: Biochemistry
Other category, if any:

Unravelling the mechanistic basis of chromatin ubiquitylation in the DNA damage response involving RNF168

Franz, Pauline

Pauline Franz (1)
(1) EPFL, Laboratory of Biophysical Chemistry of Macromolecules

30

Chemical Biology

Secondary category, if any: Plant Sciences
Other category, if any: Microalgae

Comparative analyses and evaluation of the antiaging potential of selected microalgae strains

Labrou, Nikolaos

Nikolaos Georgakis (1), Elisavet Ioannou (1), Evangelia Chronopoulou (1), Panagiotis Madesis (2), Nikolaos Labrou (1)*
(1) Agricultural University of Athens, Biotechnology
(2) CERTH, Institute of Applied Biosciences

31

Chemical Biology

Secondary category, if any: Molecular and Cellular Biosciences
Other category, if any:

Novel strategies and tools to study the small proteome

Lafranchi, Lorenzo

Lorenzo Lafranchi (1), Dörte Schlesinger (1), Kyle Kimler (1), Simon Elsässer (1)*
(1) Karolinska Institutet, Department of Medical Biochemistry and Biophysics

32

Computational Biology

Secondary category, if any: Precision Medicine
Other category, if any: Pharmacogenomics

In silico predictions on UGT2B10 involvement in detoxification of commonly used medication in pediatric allogeneic hematopoietic stem-cell transplantation

Robin, Shannon

Shannon Robin (1), Khalil Ben Hassine (1)°, Simona Mlakar (1)°, Tiago Nava (1)°, Marc Ansari (2)°, Chakradahara Rao S. Uppugunduri (1)*
(1) University of Geneva, Department of Pediatrics, Gynecology and Obstetrics
(2) Geneva University Hospitals, Department of Pediatrics, Gynecology and Obstetrics

33

Drug Discovery

Secondary category, if any: Pharmacology
Other category, if any: Chemical Biology

From Pan to PI3Kα-Selective Inhibitors: A Covalent Strategy To Fine-Tune Isoform-Specific Targeting

Borsari, Chiara

Chiara Borsari (1), Erhan Keles (1)°, Jacob McPhail (2)°, Alexander Schäfer (3)°, Rohitha Sriramaratnam (1)°, Matthias Gstaiger (3)°, John Burke (2)°, Matthias Wymann (1)*
(1) University of Basel, Department of Biomedicine
(2) University of Victoria, Department of Biochemistry and Microbiology

(3) ETH Zurich, Department of Biology, Institute of Molecular Systems Biology

34

Drug Discovery

Secondary category, if any: Microbiology

Other category, if any: Biodegradable Polymers

Synthesis of biodegradable composites (Chitosan, Cellulose, Starch) and its integration with coagulation compounds (Octenidine dihydrochloride and Nitrocellulose) for medical applications

Seidi, Amirmohammad

Amirmohammad Seidi (1), Kambiz Tahvildari (2)^o, Tania Bigdeli (2)^o

(1) University of Bern, Chemistry and Biochemistry

(2) Islamic Azad University Tehran North Branch, Chemistry

35

Drug Discovery

Secondary category, if any: Molecular and Cellular Biosciences

Other category, if any:

Exploring the role of CEMIP in Alport syndrome

Spataro, Sofia

Sofia Spataro (1), Filippo Donati (1), Jacopo Sgrignani (2), Andrea Cavalli (2), Leonardo Scapozza (1), Marco Prunotto (1)*

(1) University of Geneva, School of Pharmaceutical Sciences

(2) Università della Svizzera Italiana, Institute for Research in Biomedicine

36

Genetics

Secondary category, if any: Molecular and Cellular Biosciences

Other category, if any: epigenetics

Paternal intergenerational effects in zebrafish implicate a role of sperm-derived small RNAs

Ord, James

James Ord (1), Paul Heath (2)^o, Alireza Fazeli (3)^o, Penelope Watt (4)*

(1) University of Bern, Centre for Fish and Wildlife Health

(2) University of Sheffield, Sheffield Institute of Translational Neuroscience

(3) University of Tartu, Institute of Biomedicine and Translational Medicine

(4) University of Sheffield, Department of Animal and Plant Science

37

Microbiology

Secondary category, if any: Structural Biology

Other category, if any: Molecular and Cellular Biosciences

Specific lysis of prey peptidoglycan enabling predatory bacterium Bdellovibrio bacteriovorus to exit from its host bacterium

Huwiler, Simona

Simona G. Huwiler (1), Christopher J. Harding (2), Hannah Somers (3), Carey Lambert (3), Luke J. Ray (3), Rob Till (3), Georgina Tylor (3), Andrew L. Lovering (2), R. Elizabeth Sockett (3)*

(1) University of Zurich, Zurich, CH, Department of Plant and Microbial Biology

(2) University of Birmingham, Birmingham, UK, School of Biosciences

(3) University of Nottingham, Nottingham, UK, School of Life Sciences

38

Microscopy

Secondary category, if any: Microbiology

Other category, if any:

Ultrastructure Expansion Microscopy of TAC Protein-complex Arrangement in T. brucei

Kalichava, Ana

Ana Kalichava (1), Torsten Ochsenreiter (1)*

(1) University of Bern, Cell biology

39

Microscopy

Secondary category, if any: Drug Discovery

Other category, if any: Organoid biology

Phenotypic landscape of intestinal organoid regeneration

Lukonin, Ilya

Ilya Lukonin (1), Prisca Liberali (1)*

(1) Friedrich Miescher Institute for Biomedical Research, Quantitative Biology

40**Molecular and Cellular Biosciences**

Secondary category, if any: Microscopy

Other category, if any:

Phosphorylated paxillin and FAK constitute subregions within focal adhesions**Bachmann, Michael**

Michael Bachmann (1), Artiom Skripka (2), Martin Bastmeyer (3), Bernhard Wehrle-Haller (1)
 (1) Centre Medical Universitaire, Physiology and Cell Metabolism
 (2) Institut National de la Recherche Scientifique
 (3) Karlsruhe Institute for Technology, Zoological Institute

41**Molecular and Cellular Biosciences**

Secondary category, if any: Physiology

Other category, if any:

Isolation of mouse hepatic stellate cells with CD11b-negative sorting and further characterization with cluster of differentiation 38**Balaphas, Alexandre**

Alexandre Balaphas (1), Jeremy Meyer (1), Cécile Gameiro (2), Aurélien Frobert (3), Marie-Noelle Giraud (3), Bernhard Egger (3), Leo H Bühler (3), Carmen Gonelle-Gispert (3)*
 (1) University Hospitals of Geneva and University of Geneva, Department of Surgery, Division of digestive surgery
 (2) University of Geneva, Flow cytometry core facility
 (3) University of Fribourg, Faculty of Science and Medicine, Section of Medicine

42**Molecular and Cellular Biosciences**

Secondary category, if any: Genetics

Other category, if any: Evolution, Proteomics

An incompressible Hsp90 level defines the threshold of life for mammals**Bhattacharya, Kaushik**

Kaushik Bhattacharya (1), Dina Hany (1)°, Samarpan Maiti (1)°, Lorenz Weidenauer (2)°, Diana Wider (1)°, Manfredo Quadroni (2)°, Didier Picard (1)*
 (1) University of Geneva, Department of Cell Biology
 (2) Université de Lausanne, Protein Analysis Facility, Center for Integrative Genomics

43**Molecular and Cellular Biosciences**

Secondary category, if any: Cancer Biology

Other category, if any: Microscopy

SH3BP4 regulates endocytosis of neuropilin-1 and α 5-integrin and mediates semaphorin resistance in lung cancer**Burckhardt, Christoph**

Christoph Burckhardt (1)*, John Minna (2)°, Gaudenz Danuser (1)°
 (1) UT Southwestern Medical Center, Department of Cell Biology
 (2) UT Southwestern Medical Center, Comprehensive Cancer Center

44**Molecular and Cellular Biosciences**

Secondary category, if any: Cancer Biology

Other category, if any: mTOR signaling

A novel mTORC1-GRASP55 signaling axis reshapes the extracellular proteome upon stress**Demetriades, Constantinos**

Julian Nüchel (1), Marina Tauber (1), Janica L. Nolte (2), Matthias Mörgelin (3), Clara Türk (2), Beate Eckes (4), Constantinos Demetriades (5)*, Markus Plomann (1)*
 (1) University of Cologne, Faculty of Medicine and University Hospital Cologne, Center for Biochemistry, 50931 Cologne, Germany
 (2) University of Cologne, Cologne Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD), 50931 Cologne, Germany
 (3) Colzyx AB, Medicon Village, 223 63 Lund, Sweden
 (4) University of Cologne, Medical Faculty and University Hospital Cologne, Translational Matrix Biology, 50931 Cologne, Germany
 (5) Max Planck Institute for Biology of Ageing (MPI-AGE), 50931 Cologne, Germany

45**Molecular and Cellular Biosciences**

Secondary category, if any: Drug Discovery

Other category, if any:

Development and implementation of a new tool to explore uncharted pathways and validate targets**El Phil, Radhia**

Radhia El Phil (1), Sébastien Tardy (1), Aurélie Gouiller (1), Olivier Petermann (1), Leonardo Scapozza (2) (1) Institute of Pharmaceutical Sciences of Western Switzerland, Pharmaceutical Biochemistry/Chemistry (2) Institute of Pharmaceutical Sciences of Western Switzerland, Pharmaceutical Biochemistry/Chemistry

46

Molecular and Cellular Biosciences

Secondary category, if any:
Other category, if any: Immunology

TRIF regulates MYD88 in a mouse model of Multiple Sclerosis

M Ferreira, Filipa

Filipa M Ferreira (1)
(1) UZH, LTK

47

Molecular and Cellular Biosciences

Secondary category, if any: Genetics
Other category, if any:

PGC-1alpha regulates gene transcription via RNA-binding in liquid-like nuclear condensates

Pérez-Schindler, Joaquín

Joaquín Pérez-Schindler (1)[°], Bastian Kohl (1)[°], Konstantin Schneider-Heieck (1)[°], Aurel Leuchtmann (2)[°], Volkan Adak (1)[°], Geraldine Maier (1)[°], Julien Delezie (1)[°], Thomas Sakoparnig (1)[°], Elyzabeth Vargas-Fernández (1)[°], Bettina Karrer-Cardel (1)[°], Danilo Ritz (1)[°], Alexander Schmidt (1)[°], Maria Hondele (1)[°], Sebastian Hiller (1)[°], Christoph Handschin (1)[°]
(1) University of Basel, Biozentrum
(2) University of Basel, Biozentrum

48

Molecular and Cellular Biosciences

Secondary category, if any:
Other category, if any:

Developing ways to fight bacterial pathogens: novel enzybiotics for Acinetobacter baumannii

Premetis, Georgios

Georgios E. Premetis (1)[°], Nikolaos E. Labrou (1)[°]
(1) Agricultural University of Athens, Laboratory of Enzyme Technology, Department of Biotechnology, School of Applied biology and Biotechnology

49

Molecular and Cellular Biosciences

Secondary category, if any: Physiology
Other category, if any: Immunology

Neutrophil extracellular traps formation in mice with myeloid-specific ablation of STIM1/2 genes

Rabesahala de Meritens, Camille

Camille Rabesahala de Meritens (1), Amado Carreras-Sureda (1), Nicolas Demaurex (1)^{*}
(1) University of Geneva, Switzerland, Department of Cellular Physiology and Metabolism

50

Molecular and Cellular Biosciences

Secondary category, if any: Ageing
Other category, if any: Microscopy

Mitochondrial transcription is confined.

Rey, Timo

Timo Rey (1), Suliana Manley (1)^{*}
(1) EPFL, LEB-IPHYS

51

Molecular and Cellular Biosciences

Secondary category, if any: Genetics
Other category, if any: Splicing-linked Diseases

Targeting RNA Conformational Ensemble for Developing Therapeutics against Splicing-linked Disease: Hutchinson-Gilford Progeria Syndrome

Sahi, Ece

Ece Sahi (1), Amparo Garcia-Lopez (1)[°], Leonardo Scapozza (1)^{*}
(1) University of Geneva, School of Pharmaceutical Sciences

52**Molecular and Cellular Biosciences**

Secondary category, if any: **Biochemistry**
 Other category, if any: **Drug discovery and Genetics**

A novel tool for small molecule target identification in cytosolic and organellar sub-proteomes of Trypanosoma brucei under in-vivo conditions

Sahraoui, Suzanne Sherihan

*Suzanne Sherihan Sahraoui (1), Oscar Vadas (2)°, Sébastien Tardy (1)°, Aurélie Goullier (1)°, Olivier Petermann (1)°, Leonardo Scapozza (1)**
 (1) University of Geneva, School of Pharmaceutical Sciences
 (2) University of Geneva, Department of Microbiology and Molecular Medicine

53**Molecular and Cellular Biosciences**

Secondary category, if any: **Physiology**
 Other category, if any: **Metabolism**

MiR-149 in Non-Alcoholic Fatty Liver Disease

Sousa, Marta

*Marta Correia de Sousa (1), Monika Gjorgjieva (1), Flavien Berthou (1), Cyril Sobolewski (1), Margot Fournier (1), Christine Maeder (1), Michelangelo Foti (1)**
 (1) Faculty of Medicine, University of Geneva, Department of Cell Physiology and Metabolism

54**Molecular and Cellular Biosciences**

Secondary category, if any: **Physiology**
 Other category, if any: **Mitochondria**

Crosstalk between Drp1 phosphorylations during mitochondrial remodeling and their impact on metabolic adaptation.

Valera-Alberni, Miriam

*Miriam Valera-Alberni (1), Magali Joffraud (2), Joan Miro-Blanch (3), Jordi Capellades (3), Alexandra Junza (3), Jose L. Sanchez-Garcia (2), Armand Valsesia (2), Angélique Cercillieux (1), Flavia Söllner (4), Andreas Ladurner (4), Oscar Yanes (3), Carles Canto (1)**
 (1) Nestlé Research Ltd; School of Life Sciences, École Polytechnique Fédérale de Lausanne (EPFL), Lausanne 1015, Switzerland

(2) Nestlé Research Ltd, Lausanne 1015, Switzerland
 (3) Metabolomics Platform, IISPV, Department of Electronic Engineering, Universitat Rovira i Virgili, 43003 Tarragona, Spain
 (4) Biomedical Center, Department of Physiological Chemistry, Ludwig-Maximilians- Universität München, 82152 Planegg-Martinsried, Germany

55**Neuroscience**

Secondary category, if any: **Physiology**
 Other category, if any:

Role of CGRP LPBN neurons in the mediation of amylin's and sCT's anorectic effect

Boccia, Lavinia

*Lavinia Boccia (1)°, Christelle Le Foll (1)°, Thomas Lutz (1)**
 (1) University of Zurich, Veterinary Physiology

56**Neuroscience**

Secondary category, if any: **Systems Biology**
 Other category, if any: **Brain-body interactions**

Chemogenetic activation of VGLUT2 neurons in the left nodose ganglion of the vagal nerve suppresses REM sleep in mouse

Cherrad, Najma

*Najma Cherrad (1), Romain Cardis (1), Alejandro Osorio-Forero (1), Myrtha Arnold (2), Laura Fernandez (1), Anita Lüthi (1)**
 (1) University of Lausanne, Department of Fundamental Neuroscience
 (2) ETH Zürich, SLAAF

57**Neuroscience**

Secondary category, if any: **Molecular and Cellular Biosciences**
 Other category, if any: **Lipidomics**

DEGS1 activity is pivotal for CNS myelin formation

Karsai, Gergely

*Gergely Karsai (1), Shazia Yazdani (2)°, Julia Edgar (2)°, Thorsten Hornemann (1)**

(1) University Hospital Zürich, Institute of Clinical Chemistry

(2) University of Glasgow, Institute of Infection, Immunity and Inflammation

58

Neuroscience

Secondary category, if any:

Other category, if any: Behavior/Circuit
Neuroscience

New players in the brain circuits of movement: D1 axonal collaterals act as a second “direct” pathway to support motor control

Labouesse, Marie

Marie Labouesse (1), Joseph Villarin (2)°, Arturo Torres-Herraez (2)°, Xiaoxiao Sun (2)°, Sherry Lam (3)°, Jordi Bonaventura (3)°, Fernanda de Carvalho (2)°, Julia Greenwald (2)°, Alice Tang (4)°, Clay Lacefield (2)°, Michael Michaelides (3)°, Savio Chan (5)°, Ofer Yizhar (6)°, Christoph Kellendonk (2)*

(1) University of Zurich and Columbia University/NYSPI

(2) Columbia University/NYSPI

(3) NIH/NIDA

(4) Columbia University

(5) Northwestern University

(6) Weizmann Institute of Science

59

Neuroscience

Secondary category, if any: Physiology

Other category, if any: Neurological or mood disorders, depression

Glial Per2 regulates mood-related behaviour in mice

Martini, Tomaz

Tomaz Martini (1), Jürgen Ripperger (1)°, Jimmy Stalin (2)°, Michael Stumpe (1)°, Urs Albrecht (1)*

(1) University of Fribourg, Biology

(2) University of Fribourg, Medicine

60

Pharmacology

Secondary category, if any: Cancer Biology

Other category, if any: Immunology

Identification of Sialyltransferases specific for Siglec-7 or -9 Ligands

Hugonnet, Marjolaine

Marjolaine Hugonnet (1), Quentin Haas (1)°, Stephan von Gunten (1)*

(1) University of Bern, Institute of Pharmacology

61

Pharmacology

Secondary category, if any: Biochemistry

Other category, if any: Immunology

Cell-type-specific Expression of SIGLEC7 and SIGLEC9 is Associated with Differential Promoter Methylation

Mürner, Lukas

Lukas Mürner (1), Stephan von Gunten (1)*

(1) University of Bern, Institute of Pharmacology

62

Pharmacology

Secondary category, if any: Molecular and Cellular

Biosciences

Other category, if any:

On the quest for the true character of immature neutrophils

Verschoor, Daniëlle

Daniëlle Verschoor (1), Stefanie Graeter (1)°, Stephan von Gunten (1)*

(1) University of Bern, Institute of Pharmacology

63

Physiology

Secondary category, if any:

Other category, if any:

Physiological role of Store-Operated Calcium Entry (SOCE) during ex vivo maturation of human

Brunetti, Jessica

Jessica Brunetti (1), Maud Frieden (1)*

(1) University of Geneva, Cellular Physiology and Metabolism

64

Physiology

Secondary category, if any: **Molecular and Cellular Biosciences**

Other category, if any: **Ion Channel**

S-palmitoylation regulates ORAI1 distribution in membrane lipids to maximize Ca²⁺ channel activity at the immune synapse in T cells

Carreras, Amado

Amado Carreras-Sureda (1), Laurence Abrami (2), Ji-Hee Kim (1), Monica Didier (1), Gisou Van der Goot (2), Nicolas Demaurex (1)*
(1) Department of Cell Physiology and Metabolism, University of Geneva, Geneva, 1211, Switzerland
(2) Faculty of Life Sciences, Global Health Institute, École Polytechnique Fédérale de Lausanne, 1015 Lausanne, Switzerland

65

Physiology

Secondary category, if any:

Other category, if any:

Absence of androglobin leads to incorrect septin localization and male infertility

Correia, Miguel

Miguel Correia (1), Anna Keppner (1), Darko Maric (2), Teng Wei Koay (1), Ilaria Orlando (1), Angèle Clerc (1), Michael Stumpe (3), Dieter Kressler (3), David Hoogewijs (1)*
(1) University of Fribourg, Physiology
(2) University of Fribourg, Physiology
(3) University of Fribourg, Biology

66

Physiology

Secondary category, if any: **Molecular and Cellular Biosciences**

Other category, if any:

FOXC2 controls adult lymphatic endothelial specialization, function and gut lymphatic barrier preventing multi-organ failure

González Loyola, Alejandra

Alejandra González-Loyola (1), Esther Bovay (2), Jaeryung Kim (3), Tania Wyss Lozano (4), Amelie Sabine (3), Francois Renevey (5), Alexis Rapin (6), Tomasz P. Wych (7), Giorgia Rota (8), Stephan Durot (9), Dominique Velin (10), Benjamin Marsland (11), Greta Guarda (12),

Mauro Delorenzi (13), Nicola Zamboni (9), Sanjiv A. Luther (14), Tatiana V. Petrova (15)*

(1) Centre Hospitalier Universitaire Vaudois, University of Lausanne, and Ludwig Institute for Cancer Research Lausanne, Epalinges, 1066 Switzerland., Department of Oncology

(2) Max Planck Institute for Molecular Biomedicine Münster, 48149 Germany, Department of Tissue Morphogenesis

(3) Centre Hospitalier Universitaire Vaudois, University of Lausanne, and Ludwig Institute for Cancer Research Lausanne, Epalinges, 1066 Switzerland, Department of Oncology

(4) Centre Hospitalier Universitaire Vaudois, University of Lausanne, and Ludwig Institute for Cancer Research Lausanne, Epalinges, 1066 Switzerland and SIB Swiss Institute of Bioinformatics, Lausanne, 1015 Switzerland., Department of Oncology

(5) University of Lausanne, Epalinges, 1066 Switzerland., Department of Biochemistry

(6) École Polytechnique Fédérale de Lausanne, Lausanne, 1015 Switzerland.

(7) Monash University, Melbourne, 3800 Australia., Department of Immunology and Pathology

(8) University of Lausanne, Epalinges, 1066 Switzerland., Department of Biochemistry

(9) Institute of Molecular Systems Biology ETH, Zurich, 8093 Switzerland.

(10) Centre Hospitalier Universitaire Vaudois and University of Lausanne, Lausanne, 1011 Switzerland., Department of Medicine

(11) Monash University, Melbourne, 3800 Australia, Department of Immunology and Pathology

(12) Institute for Research in Biomedicine, Università della Svizzera italiana, Bellinzona, 6500 Switzerland.

(13) Centre Hospitalier Universitaire Vaudois, University of Lausanne, and Ludwig Institute for Cancer Research Lausanne, Epalinges, 1066 Switzerland and SIB Swiss Institute of Bioinformatics, Lausanne, 1015 Switzerland, Department of Oncology

(14) University of Lausanne, Epalinges, 1066 Switzerland., Department of Biochemistry

(15) Centre Hospitalier Universitaire Vaudois, University of Lausanne, and Ludwig Institute for Cancer Research Lausanne, Epalinges, 1066 Switzerland., Department of Oncology

67

Physiology

Secondary category, if any: **Molecular and Cellular Biosciences**

Other category, if any:

Regulation of calcium fluxes at endoplasmic reticulum - plasma membrane contact sites

Henry, Christopher

Christopher Henry (1), Nicolas Demaurex (1)*
(1) University of Geneva, Department of Cellular Physiology and Metabolism

68**Physiology**Secondary category, if any: **Molecular and Cellular Biosciences**

Other category, if any:

CFTR and signaling pathways in differentiation towards a functional airway epithelium**Idris, Tahir***Tahir Idris (1)[°], Mehdi Badaoui (1)[°], Marc Bacchetta (1)[°], Marc Chanson (1)^{*}
(1) University of Geneva, Department of Cell Physiology and Metabolism***69****Physiology**Secondary category, if any: **Molecular and Cellular Biosciences**

Other category, if any:

Role of phosphatidylinositol transfer proteins during phagocytosis**Kaba, Mayis***Mayis Kaba (1), Paula Nunes-Hasler (2), Nicolas Demaurex (1)^{*}
(1) University of Geneva, Cell Physiology and Metabolism
(2) University of Geneva, Pathology and Immunology***70****Physiology**Secondary category, if any: **Molecular and Cellular Biosciences**Other category, if any: **Gene regulation****Unraveling the cryptic transcriptional landscape of the androglobin gene****Teng Wei, Koay***Teng Wei Koay (1)[°], Ilaria Orlando (1), Anna Keppner (1), Miguel Correia (1), David Hoogewijs (1)^{*}
(1) University of Fribourg, Switzerland, Department of Endocrinology, Metabolism and Cardiovascular System***71****Physiology**Secondary category, if any:
Other category, if any:**Role of Orai3 in the activation mechanisms of human muscle reserve cells****Tollance, Axel***Axel Tollance (1), Stéphane König (1), Maud Frieden (1)^{*}
(1) University of Geneva, Department of Cell Physiology and Metabolism***72****Precision Medicine**Secondary category, if any: **Genetics**
Other category, if any:**Circadian traits as quantitative biomarkers in diabetes****Du, Ngoc-Hien***Ngoc-Hien Du (1)[°], Flore Sinturel (2)[°], Nora Nowak (3)[°], Pauline Gosselin (2)[°], Camille Saini (2)[°], Guillaume Rey (4)[°], François Jornayvaz (5)[°], Jacques Philippe (5)[°], Renato Zenobi (3)[°], Emmanouil Dermitzakis (4)[°], Charna Dibner (2)[°], Steven Brown (1)^{*}
(1) University of Zurich, Institute of Pharmacology and Toxicology
(2) University of Geneva, Department of Cell Physiology and Metabolism
(3) ETH Zurich, Department of Chemistry and Applied Biosciences
(4) University of Geneva, Institute of Genetics and Genomics in Geneva (iGE3)
(5) University Hospital of Geneva, Department of Medicine***73****Structural Biology**Secondary category, if any: **Molecular and Cellular Biosciences**
Other category, if any:**Fifty Shades of Grey: Cryo Electron Tomography of the TAC region in Trypanosoma brucei****Bregy, Irina***Irina Bregy (1), Julika Radecke (2)[°], Torsten Ochsenreiter (3)^{*}, Benoît Zuber (4)^{*}*

(1) University of Bern, Institute of Anatomy / Institute of Cell Biology

(2) Diamond Light Source, eBIC

(3) University of Bern, Institute of Cell Biology

(4) University of Bern, Institute of Anatomy

74

Systems Biology

Secondary category, if any: **Microscopy**

Other category, if any:

Mechanisms of size uniformity during animal growth

Towbin, Benjamin

Benjamin Towbin (1)*, Helge Grosshans (2), Gregory Roth (2)

(1) University of Bern, Institute of Cell Biology

(2) Friedrich Miescher Institute

75

Systems Biology

Secondary category, if any: **Computational Biology**

Other category, if any: **Microbiology**

Integrated multiomics unravels metabolic diet-microbiota-host interactions

Zimmermann, Maria

Maria Zimmermann-Kogadeeva (1), Natasha A. Barry (2), Michael Zimmermann (1), Peer Bork (1)*, Andrew L. Goodman (2)*

(1) EMBL Heidelberg, Structural and Computational Biology

(2) Yale University School of Medicine, Microbial Pathogenesis