LS² Annual Meeting 2019
“Cell Biology from Tissue to Nucleus”

Meeting Booklet

14-15 February, University of Zurich, Campus Irchel
WELCOME ADDRESS

Dear colleagues and friends

It is with great pleasure that we invite you to the LS² Annual Meeting 2019, held on the 14th and 15th of February, 2019 at the Irchel Campus of the University of Zurich. This is a special year, as it is the 50th anniversary of USGEB/LS², which we will celebrate with a Jubilee Apéro on Thursday 14th.

The LS² Annual Meeting brings together scientists from all nations and backgrounds to discuss a variety of Life Science subjects. The meeting this year focuses on the cell in health and disease, with plenary talks on different aspects of cell biology and a symposium on live cell imaging approaches.

You will be able to hear the latest, most exciting findings in several fields, from Molecular and Cellular Biosciences, Proteomics, Chemical Biology, Physiology, Pharmacology and more, presented by around 30 invited speakers and 45 speakers selected from abstracts in one of the seven scientific symposia and five plenary lectures.

Two novelties highlight the meeting this year:

The "PIs of Tomorrow" session, in which selected postdocs will present their research to a jury of professors, will be for the first time a plenary session. In addition, poster presenters will be selected to give flash talks in the symposia with the spirit to further promote young scientists.

Join us for the poster session with more than 130 posters, combined with a large industry exhibition and the Jubilee Apéro.

For the 2019 edition, six poster prizes will be awarded!

This year the topic of the public Science policy panel will be “Is merit (gender) biased? Advancement in academia”. We have excellent invited speakers that will introduce the topic and stimulate an open discussion with the public.

As every year, we’re also very much looking forward to the laureate talks of the winners of the Friedrich-Miescher Award and the Lelio Orci Award.

We are extremely grateful to all our sponsors and exhibitors of the 2019 edition (see page 8/9), who contributed to make this big event
possible, and cordially invite you to visit their latest advances & products at the booths in between the sessions. Please go and visit their booths and at the same time take your chance to win big prizes in the new Exhibition Lottery (see pages 19-22)!

We are looking forward to this diverse & exciting program and wish you a memorable time!

With kind regards

Monica Gotta
(University of Geneva, Chairwoman of the LS² Annual Meeting 2019)
ACCREDITATION FOR CONTINUOUS EDUCATION

A request has been submitted to accredit the entire LS² Annual Meeting 2019 for days of continuous education in the field of animal experimentation. Unfortunately, the request was still ongoing until the meeting booklet printing deadline (January 22, 2019). Participants will be informed about the outcome by e-mail after the meeting.

CONFERENCE WIFI ACCESS

Access http://t.uzh.ch/coa
& enter the Event-ID: 19LS2182944

NURSING & PARENTING ROOM

If you require a calm area or room to nurse your child, please inquire at the registration desk for the key and directions.
THANK YOU
TO OUR
SPONSORS AND EXHIBITORS
ORGANIZING COMMITTEE 2019

LS² ANNUAL MEETING CHAIR
Monica Gotta / University of Geneva

SCIENTIFIC COMMITTEE
Vikram Panse / University of Zurich
Darren Gilmour / University of Zurich
Anne Spang / University of Basel
Peter Meister / University of Bern
Suliana Manley / EPF Lausanne

LS² MANAGEMENT OFFICE
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OUR FREELANCE SUPPORT:
Dagmar Bocakova / Design
Dominique Ritter / Administration & accounting support
Michael Vögeli / IT infrastructure

LS² SECTIONS
Molecular and Cellular Biosciences (MCB) / Physiology / Proteomics /
Autophagy / Systems Biology / Intersection Cardiovascular Biology

LS² PARTNER SOCIETIES
Swiss Chemical Society (SCS), division DMCCB
Swiss Society for Anatomy, Histology and Embryology (SSAHE)
Swiss Society for Experimental Pharmacology (SSEP)
Swiss Laboratory Animal Science Association (SGV)

LS² IS A MEMBER OF THE SWISS ACADEMY OF SCIENCES

sc nat
Member of the Swiss Academy of Sciences

LS²
Life Sciences Switzerland
First-time members of Life Sciences Switzerland (LS²) are offered a 50% discount on their first year American Society for Cell Biology (ASCB) membership dues!

50% off

www.ascb.org
FLOOR PLAN

EXHIBITORS
1. Enzo Life Sciences
2. Huberlab
3. Witec
4. Chemie Brunschwig
5. Biotechne
6. Jackson Immuno Research
7. Omni Life Sciences
Board meeting rooms F60 & F70 are located downstairs from the registration desk.

1. Lecture hall G85
2. 1-8
3. 56-63
4. 64-72
5. 73-80
6. 81-87
7. 88-96
8. 97-104
9. 105-112
10. 113-119
11. 120-126
12. Registration

9. PeproTech
10. Axon Lab
11. VWR International
12. INTEGRA Biosciences
13. Microsynth
14. Takara Bio Europe
15. Socorex
16. Lab Force
17. BMG Labtech
18. Merck
19. LubioScience
20. Macherey Nagel
21. Life Systems Design
22. Labgene Scientific
23. Promega
24. Tecan
25. Roth
26. Eurofins Genomics
27. Bucher Biotec
28. IGZ Instruments
29. GE Healthcare
30. Beckman Coulter
31. BioTek Instruments
32. Eppendall
Producing the meeting bags of the LS2 Annual Meeting 2019

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Social Fabric promotes the use of textiles that have a small ecological footprint, and supports the human potential of vulnerable groups, including refugees in Switzerland.

Social Fabric  |  Eichstrasse 29, 8045 Zurich  |  www.socialfabric.ch

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PROGRAM OVERVIEW DAY ONE  
THURSDAY 14.02.2019

08:00 – 09:00  REGISTRATION, WELCOME COFFEE, MOUNTING OF POSTERS

09:00 – 09:10  WELCOME ADDRESS
Lecture hall G30
Monica Gotta (Chairwoman of the LS² Annual Meeting 2019)
Urs Greber (President of LS²)

09:10 – 10:00  PLENARY LECTURE I
Lecture hall G30
"The EMBO Keynote Lecture"
Anna AKHMANOVA (Utrecht University, NL)
"Regulation of microtubule catastrophe, rescue and repair: seeing proteins and drugs in action"

10:00 – 10:10  Update by the Swiss Laboratory Animal Science Association (SGV)
Lecture hall G30
& Announcement by the new Swiss 3R Competence Centre

10:10 – 10:35  COFFEE BREAK @ LICHTHOF, INDUSTRY EXHIBITION, POSTER VIEWING

10:35 – 12:30  SPECIAL PLENARY SESSION
Lecture hall G30
PIs OF TOMORROW - THE FUTURE OF SWISS RESEARCH

12:40 – 14:45  FEEDBACK SESSION PIs OF TOMORROW
Room F70
(downstairs)
For jury and finalists only
Lunch bags will be delivered into the room

12:30 – 13:45  LUNCH BREAK @ LICHTHOF, INDUSTRY EXHIBITION, POSTER VIEWING

12:35 – 13:45  CAREERS LUNCH SESSION
Lecture hall G95
"You and your career"
SANDWICH LUNCH WILL BE PROVIDED IN THE ROOM!
Note that the regular hot lunch from the catering zones cannot be taken into the room.
12:30 – 13:45  
LS² Molecular & Cellular Biosciences Section Board Meeting  
Upon invitation only

13:45 – 15:45  
PARALLEL SYMPOSIA I

13:45 – 15:45  
1 - THE PROTEOME IN 3D  
by LS² Section Proteomics

13:45 – 15:45  
2 - BACTERIAL CELL BIOLOGY  
by Swiss Society for Microbiology (SSM)

13:45 – 15:45  
3 - LIVE CELL IMAGING APPROACHES IN CELL BIOLOGY  
by LS² Section Molecular & Cellular Biosciences

15:45 – 16:15  
COFFEE BREAK @ LICHTHOF, INDUSTRY EXHIBITION, POSTER VIEWING

16:15 – 16:45  
FRIEDRICH-MIESCHER-AWARD LECTURE  
Bernd Bodenmiller (University of Zurich)  
“Analysis of tissue ecosystems in health and disease by highly multiplexed imaging”

16:45 – 17:30  
PLENARY LECTURE II  
Jodie ROSENBLATT  
(formerly University of Utah, US; now King's College London, UK)  
“Epithelial cell extrusion and its misregulation in disease”

17:30 – 18:30  
POSTER SESSION & INDUSTRY EXHIBITION @ LICHTHOF  
Please note that the food and the full Apéro will only start after this session to really allow for uninterrupted interactions at posters and booths! Just grab a drink and enjoy the posters & exhibition first please!

Odd poster numbers: 17:30 – 18:00  
Even poster numbers: 18:00 – 18:30

18:30 – 20:30  
Jubilee Apéro: "50 years of USGEB/LS²"

20:35 – 21:15  
LS² Delegates Assembly  
Upon invitation only
PROGRAM OVERVIEW DAY TWO
FRIDAY 15.02.2019

09:00 – 09:55
PLENARY LECTURE III:
Leonie RINGROSE (Humboldt University, Berlin, DE)
“Epigenetics meets mathematics: The fusion of experiment and theory brings insights beyond intuition”

09:55 – 10:00
A WORD FROM THE MEETING CHAIRWOMAN MONICA GOTTA

10:00 – 10:30
COFFEE BREAK @ LICHTHOF, INDUSTRY EXHIBITION, POSTER VIEWING

10:30 – 12:30
PARALLEL SYMPOSIA II

10:30 – 12:30
1 - SWEET MOLECULES IN INFLAMMATION & CANCER (GLYCOSCIENCES)
by LS² Partners Swiss Society of Experimental Pharmacology (SSEP)

10:30 – 12:30
2 - CHEMICAL BIOLOGY & DRUG DEVELOPMENT
by the LS² Partners Swiss Chemical Society (SCS)

10:30 – 12:30
3 - CHROMATIN, EPIGENETICS AND THE TRANSMISSION OF ACQUIRED STATES ACROSS GENERATION
by LS² Section Molecular & Cellular Biosciences

12:30 – 13:00
LUNCH BREAK @ LICHTHOF, POSTER VIEWING, INDUSTRY EXHIBITION

12:30 – 13:00
SSEP Board Meeting
Upon invitation only

13:00 – 14:00
POSTER SESSION & INDUSTRY EXHIBITION @ LICHTHOF
14:00 – 16:00  PARALLEL SYMPOSIA III

14:00 – 16:00  1 - PUBLIC PANEL DISCUSSION
Lecture hall G60
“Is merit (gender) biased? Advancement in academia”

14:00 – 16:00  2 - REGENERATION & PATHOLOGY OF SKELETAL MUSCLE
Lecture hall G85
by LS² Section Physiology

16:00 – 16:30  COFFEE BREAK @ LICHTHOF, INDUSTRY EXHIBITION,
POSTER VIEWING

16:00 – 16:30  LS² General Assembly
Lecture hall G95
All members are welcome & have voting rights!

16:30 – 17:15  AWARD CEREMONIES
Lecture hall G30
1. PIs of Tomorrow Award
2. Poster Prizes
3. Exhibition Lottery draw

16:45 – 17:15  PLENARY LECTURE IV
Lecture hall G30
THE LELIO ORCI AWARD LECTURE
Jean-Claude MARTINOU (University of Geneva)
Pyruvate metabolism and mitochondrial gene
expression: two facets of mitochondrial biology with
implications for neuropathologies and cancer

17:15 – 18:00  PLENARY LECTURE V
Lecture hall G30
Anne BERTOLOTTI
(MRC Laboratory of Molecular Biology, Cambridge, UK)
“Power and benefit of selective phosphatase
inhibitors for neurodegenerative diseases”

18:00 – 18:10  CLOSING REMARKS & ACKNOWLEDGMENTS
Lecture hall G30
Monica Gotta
(Chairwoman of the LS² Annual Meeting 2019, University of Geneva)
Urs Greber (President of LS², University of Zurich)

18:15  END OF THE CONFERENCE
EXHIBITION LOTTERY

Answer the following questions at the exhibitor booths, collect at least 10 stickers on your sticker sheet (inset in the meeting booklet), and bring the sheet back to us before 15.2.2019, 15:00. Then, be present during the big lottery draw at the end of the meeting to win the following great prizes!

Our sponsors of the five main lottery prizes are:

1. PRIZE: A 500 CHF gift voucher by STA Travel

Beckman Coulter
booth number 34
Create a Centrifugation Program on the Avanti J-15 Table Top Centrifuge with only a few clicks.

2. PRIZE: An Apple iPad

BioConcept
booth number 36
BioConcept is a cell and tissue culture media manufacturer, where are the products produced?

3. PRIZE: Noise-cancelling headphones

Tecan
booth number 28
Name three bench-top products from Tecan.

4. PRIZE: A 200 CHF SBB travel voucher

IGZ Instruments
booth number 32
和光 What characters are these and what is the company called in German?

5. PRIZE: A 100 CHF voucher for Orell Füssli book store

Macherey Nagel
booth number 24
#margeryexplores Pick up one of my friends at the booth and get a stamp.
All other participating exhibitors & their questions:

**Axon Lab** *booth number 10*
With which 3 workflows are you in the right place at Axonlab Life Science?

**Biotechne** *booth number 6*
Which brands make up the Bio-Techne family?

**BioTek Instruments** *booth number 35*
Do you know two products Biotek offers for live cell imaging?

**BMG Labtech** *booth number 21*
If you are into microplate readers, get into the new CLARIOstar\textsuperscript{Plus} with a virtual reality tour.

**Bucher Biotec** *booth number 31*
How many fluorescent colors can you image in parallel with the Logos Celena S digital microscope?

**Chemie Brunschwig** *booth number 5*
Who is our new supplier for exosome isolation and simple protein extraction kits?

**Enzo Life Sciences** *booth number 1*
1. Which one is not an Enzo's Technology Platform?
   - □ Live cell analysis
   - □ Chemicals Analysis
   - □ Immunoassays
   - □ Genomics
   - □ Immunohistochemistry
   - □ Small Molecule
2. What is the name of Enzo distribution platform?

**Eppendorf** *booth number 37*
What kind of tube can be used in the new Eppendorf centrifuge 5425 and not in the predecessor model?

**Eurofins Genomics** *booth number 30*
OMG: Share your craziest lab accident and win a brand-new Kindle!

**GE Healthcare** *booth number 33*
Take our short quiz at the booth!
HUBERLAB booth number 3
Which exclusive representation of HUBERLAB advertizes using the slogan "Your Power for Health"?

INTEGRA Biosciences booth number 12
How many different VOYAGER space adjustable pipette types are available?

Jackson Immuno Research booth number 7
We have added anti-Camelid secondary antibodies to our range. How many specificities to Alpaca do we have?

Lab Force booth number 20
Homogenize fruits and gummi bears with our Omni homogenizers!

Labgene Scientific booth number 26
List three major innovations / news in the labgene product range for the year 2019!

Life Systems Design booth number 25
Life Systems Design: Participants will be asked to pipette 4 different volumes of a liquid into a tube!

LubioScience booth number 23
Spin our Wheel of Fortune, receive your stamp and win additional instant prizes!

Merck booth number 22
In what scientific symposia will Merck give a 20 minutes talk?

Microsynth booth number 15
What is the fastest Sanger Sequencing Service in Switzerland? What are the three pillars of Microsynth’s product portfolio?

Omni Life Sciences booth number 8
How do you call the new device to simplify and improve your spheroid, organoid and iPS cell culture?

PeproTech booth number 9
In what year was PeproTech first started?

Promega booth number 27
List at least one technology from the Promega toolbox that allows monitoring of protein degradation in kinetic mode.
Roth booth number 29
What kind of product am I in the lab?
Find me at the Roth AG booth!

Socorex booth number 19
Guess how many pipette tips are in our vase and win a little gift!

Takara Bio Europe booth number 18
What is "Next Generation Seamless Cloning?"

VWR International booth number 11
What is the simplest, most efficient and economical way to deliver DNA to your cells and where can you find that product?

Witec booth number 4
What is the name of the brand-new instrument at our booth to dispense single-cells into 96 or 384-well plates?

Collect at least 10 stickers from our exhibitors and win!
To participate in a draw, bring your sticker sheet to the registration desk until 15.2., 15.00 and be present during the Award Ceremonies @ Lecture hall G30 from 16.30-17.15 the same day.
Good Luck!
DETAILED PROGRAM DAY ONE
THURSDAY 14.02.2019

08:00 – 09:00 REGISTRATION, WELCOME COFFEE, MOUNTING OF POSTERS

09:00 – 09:10 WELCOME ADDRESS
Monica Gotta (University of Geneva), Chairwoman of the LS² Annual Meeting 2019
Urs Greber (University of Zurich), President of LS²

09:10 – 10:00 PLENARY LECTURE I
"The EMBO Keynote Lecture"
Anna AKHMANOVA (Utrecht University, NL)
"Regulation of microtubule catastrophe, rescue and repair: seeing proteins and drugs in action"

Tight regulation of microtubule dynamics is essential for many cellular processes, including cell division, migration and morphogenesis. Using in vitro reconstitution experiments, we explored the detailed mechanisms of such regulation by microtubule plus end tracking proteins. We found that CLASPs, acting in a complex with End-Binding (EB) proteins efficiently suppressed microtubule catastrophes, including those induced by microtubule encounters with barriers, drugs and depolymerizing agents. A single conserved TOG domain of CLASPs was necessary and sufficient to perform this function. Moreover, CLASP could promote tubulin incorporation into incomplete and damaged microtubule lattices. Cell biological experiments suggested that regulation of microtubule dynamics and integrity by CLASP is essential for controlling cell shape and movement. Furthermore, we used assays with fluorescent analogues of microtubule-stabilizing and destabilising agents to directly visualize their effects on microtubule growth. We found that a single molecule of the microtubule-depolymerizing drug eribulin bound to the microtubule tip was sufficient to trigger a catastrophe. Microtubule rescue and stabilization by taxanes was more complex and required the accumulation of at least ~15 drug molecules in a defined microtubule region.
**10:00 – 10:10**
Lecture hall G30

Update by the Swiss Laboratory Animal Science Association (SGV)

Birgit Ledermann (President SGV & Novartis Pharma AG)

&

Announcement by the new Swiss 3R Competence Centre

Chantra Eskes (Executive Director, 3RCC)

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**10:10 – 10:35**

COFFEE BREAK @ LICHTHOF, INDUSTRY EXHIBITION, POSTER VIEWING

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**10:35 – 12:30**

SPECIAL PLENARY SESSION

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**10:35 – 12:30**
Lecture hall G30

**PIs OF TOMORROW - THE FUTURE OF SWISS RESEARCH**

*Chairs: Nino Nikolovski, Aleksandra Konovalova, Elisa Araldi & Emanuela Milani (All ETH Zurich)*

This session offers an opportunity to postdocs and senior researchers interested in pursuing an academic career to present a talk similar in format to a professorship application interview. The finalists below have been pre-selected from close to 60 applicants.

A knowledgeable jury panel of professors will evaluate the presentations and provide feedback in a one-on-one session afterward.

**Jury members of the 2019 edition:**

- **Leonie Ringrose** (Humboldt University Berlin, DE)
- **Christian Heinis** (EPF Lausanne)
- **Federica Sallusto** (ETH Zurich & IRB Bellinzona)
- **Martin Müller** (University of Zurich)
- **Michele de Palma** (EPF Lausanne)
- **Suliana Manley** (EPF Lausanne)
- **Matthias Peter** (ETH Zurich)
- **Nicole Joller** (University of Zurich)
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>10:35 – 10:40</td>
<td>Introductory words by the chairs of the session</td>
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| 10:40 – 11:00 | **Francesca Ronchi** (University of Bern)  
"Host-microbial interaction in brain homeostasis and inflammation“ |
| 11:00 – 11:20 | **Thomas C. T. Michaels** (Harvard University, Cambridge, MA, US)  
"Bridging time and length scales in biomolecular self-assembly“ |
| 11:20 – 11:40 | **Michael Zimmermann** (Yale University, West Haven, CT, US)  
“Harnessing microbial xenobiotic metabolism for mechanistic understanding of host-microbiota interactions“ |
| 11:40 – 12:00 | **Jean-Philippe Krieger** (Gothenburg University, SE)  
“The Voice from Within: Leveraging the Gut-Brain Axis to Reduce Symptoms in Patients with Schizophrenia“ |
| 12:00 – 12:20 | **Juho Pokki** (Stanford University, Stanford, CA, US)  
“Biomechanics of metastatic cancer development: in vitro and in vivo technologies for diagnosis and treatments“ |
| Afterwards | Collection of public votes & feedback session for jury and finalists only (see below) |
| 12:30 – 13:45 | **LUNCH BREAK @ LICHTHOF, INDUSTRY EXHIBITION, POSTER VIEWING** |
| 12:40 – 14:45 | **FEEDBACK SESSION PIs OF TOMORROW**  
*For jury and finalists only*  
*Lunch bags will be delivered into the room* |
| Room F70 (downstairs) |                                                            |
| 12:40 – 12:55 | **Jury decision meeting**  
Short session only for jury members on decision of the winner |
| 12:55 – 13:45 | **Lunch of presenters and jury members**  
General remarks, discussion, and networking |
13:45 – 14:45  
**Personal feedback**  
One-on-one feedback from 4 jury members per candidate (4 x 15 min)

*The jury prize and public prize winner will be announced during the award ceremony at the end of the meeting on February 15, 2019*

12:40 – 13:45  
**CAREERS LUNCH SESSION**  
"You and your career"

*Get prepared for your career. Learn about yourself, your possibilities on the job market, the tools to apply, and how to develop a network and a plan to get to the job you want.*

*Organized by the Career Services at the University of Zurich.*

**Invited speaker**  
Daniela Gunz *(Career Services University of Zurich)*

*SANDWICH LUNCH WILL BE PROVIDED IN THE ROOM!*  
*Note that the regular hot lunch from the catering zones cannot be taken into the room.*

12:30 – 13:45  
**LS² Molecular & Cellular Biosciences Section Board Meeting**  
*Upon invitation only*
13:45 – 15:45  PARALLEL SYMPOSIA I

13:45 – 15:45
Lecture hall G40

1 - THE PROTEOME IN 3D
by LS² Section Proteomics
Chair: Paola Picotti (ETH Zurich)

Invited speakers

13:45 – 14:15
Juri Rappsilber (TU Berlin, DE)
“In situ protein structures by mass spectrometry - emerging prospects”

14:15 – 14:45
Kathryn S. Lilley (University of Cambridge, UK)
“How RNA and protein interacts in time and space”

Industry speaker

14:45 – 14:55
Jens Laettig (Tecan)
“Semi-automated sample processing for peptide enrichment and buffer exchange”

Speakers from abstracts

14:55 – 15:05
Kathrin Frey (ETH Zurich), Poster No. 100
“Associating HDL proteotype with clinical HDL particle signaling capacity”

15:05 – 15:15
Marco Faini (ETH Zurich), Poster No. 114
“Quantitative structural biology of endogenous protein complexes ”

15:15 – 15:25
Alexander Leitner (ETH Zurich), Poster No. 115
“Structural analysis of protein–RNA complexes using crosslinking of segmentally isotope-labeled RNA and tandem mass spectrometry (CLIR-MS/MS)”

15:25 – 15:40
Poster flash talks

Philip Knobel (University of Zurich), Poster No. 29
“Exploring the interactome of ADAM17 in the tumor microenvironment and its role for radiation resistance”

Lydie Lane (SIB & University of Geneva), Poster No. 62
“Using neXtProt and other bioinformatics resources to identify human uncharacterized proteins potentially involved in male reproduction”
**Liliana Malinovska** (ETH Zurich), Poster No. 102
“Probing the structural landscape of alpha synuclein in cells and tissues”

**Stoyan Stoychev** (CSIR Biosciences, ZA), Poster No. 105
“Development of fully automated pipeline for phosphoproteome profiling”

**Rodrigo Villaseñor** (University of Zurich), Poster No. 123
“Proximity biotinylation labeling with engineered chromatin readers reveals the proteome composition of key chromatin states in mouse embryonic stem cells”

### 13:45 – 15:45
**2 - BACTERIAL CELL BIOLOGY**
*Lecture hall G95*
*by Swiss Society for Microbiology (SSM)*
*Chairs: Pilar Junier (University of Neuchâtel) & Patrick Viollier (University of Geneva)*

#### Invited speakers

**13:45 – 14:15**
**Simonetta Gribaldo** (Institut Pasteur, Paris, FR)
“Firmicutes with an outer membrane? Insights into the evolution of the bacterial cell envelope”

**14:15 – 14:45**
**Klas Flärdh** (Lund University, SE)
“Mechanisms that control cell polarity and polar growth in a bacterium”

**14:45 – 15:05**
**Christian Röhrig** (ETH Zurich), Poster No. 46
“Improved targeting of intracellular and drug-resistant *Staphylococcus aureus* by fusion of peptidoglycan hydrolases to cell-penetrating peptides”

**15:05 – 15:15**
**Eric Sumrall** (ETH Zurich), Poster No. 47
“Bacteriophage predation selects for non-virulence in *Listeria monocytogenes*”
15:15 – 15:25  Victoria Wosika (University of Lausanne), Poster No. 124
“Single promoter transcription dynamics reveal bursting kinetic chromatin regulation of osmostress genes expression”

15:25 – 15:35  Poster flash talks
Kevin Assoumou (University of Geneva), Poster No. 5
“Interaction between ESCRT and autophagy pathways in membrane damage repair”

Nienke Jager (University of Lausanne), Poster No. 45
“Single cell analysis of the filamentous growth pathway in Saccharomyces cerevisiae”

Dominik Olszewski (University of Zurich), Poster No. 125
“The role of ceramide at late stages of adenovirus infection”

13:45 – 15:45  3 - LIVE CELL IMAGING APPROACHES IN CELL BIOLOGY
Lecture hall G60

Invited speakers

13:45 – 14:15  Helder Maiato (IBMC Porto, PT)
“Spatial control of time during chromosome segregation”

EMBO Young Investigator Lecture

14:15 – 14:45  Caren Norden
(MPI of Molecular Cell Biology & Genetics, Dresden, DE)
“Marking the retina: The interplay of single cell biology and tissue-wide phenomena”

Industry speaker

14:45 – 15:05  Cornelia Rössler (Merck)
“The boost of your microscope needs for advanced live cell imaging”

Speakers from abstracts

15:05 – 15:15  Dora Mahecic (EPFL Lausanne), Poster No. 18
“Membrane bending energy and tension govern mitochondrial division”
What links cell division to cell death in order to maintain constant epithelial cell densities? We found that mechanical forces control both processes: cell stretching triggers rapid cell division, whereas, crowding causes cell death by a process we call ‘epithelial extrusion’, in which cells fated to die are seamlessly squeezed out from epithelia. Extrusion is essential for maintaining correct epithelial cell densities. We find a growing number of diseases result from misregulation of extrusion. Excessive extrusion disrupts epithelial barrier, causing inflammation and infection hyper-sensitivity after an asthma attack. Conversely, oncogenic mutations hijack apical extrusion signaling and promote a class of aggressive
tumors, which invade via a new mechanism—basal extrusion.

**17:30 – 18:30**

**POSTER SESSION & INDUSTRY EXHIBITION @ LICHTHOF**

Please note that the food and the full Apéro will only start after this session to really allow for uninterrupted interactions at posters and booths!

**Just grab a drink and enjoy the posters & exhibition first!**

*Odd poster numbers: 17:30 – 18:00*
*Even poster numbers: 18:00 – 18:30*

**18:30 – 20:30**

**Jubilee Apéro: "50 years of USGEB/LS²"**
Plus continued viewing of posters & industry exhibition

**20:30**

**END OF THE FIRST CONFERENCE DAY**

**20:35 – 21:15**

**LS² Delegates Assembly**
*Upon invitation only*
Epigenetic gene regulation is highly stable: epigenetic memory of gene expression states can persist over many cell generations and potentially for longer. However, epigenetic regulation is also flexible: genes that are subject to epigenetic regulation can respond dynamically to environmental and developmental signals. How can epigenetic regulation be both stable and flexible? I propose that the key lies in the highly dynamic nature of epigenetic systems. Over the last two decades it has become clear that the nucleus is an extraordinarily busy and noisy place: many proteins, including epigenetic regulators, are in constant motion, exchanging rapidly between chromatin bound and free states. Quantitative aspects of this motion are highly regulated. I propose that to fully understand this regulation, epigenetics needs mathematics. We need “moving models” built of mathematical descriptions, which we can feed with measured values of quantities and mobilities of the components. A good model makes testable predictions that tell us whether our hypothesis makes sense. If it does not, we change the model. There has never been a better time to combine theoretical approaches with quantitative experiments. On the theoretical side, the last decade has seen a quiet revolution in the application of models built by physicists to the deep questions of epigenetics. On the experimental side, the advent of technologies that allow real time analysis at the single cell and single molecule level, together with those that enable targeted genome editing, allow precise perturbation and quantitative measurements at an unprecedented level. It is time for epigenetics to meet mathematics. I will give examples from work in the field and in my own lab, of how the fusion of
experiment and theory has brought fresh insights into epigenetic regulation that go beyond intuition.

09:55 – 10:00
Lecture Hall G30
A WORD FROM THE MEETING CHAIRWOMAN
MONICA GOTTA

afterwards
Pitch: “LabCoffee - encouraging interaction between scientists through randomized coffee trials”
Damian Szklarczyk (Swiss Institute of Bioinformatics & University of Zurich)

10:00 – 10:30
COFFEE BREAK @ LICHTHOF, INDUSTRY EXHIBITION, POSTER VIEWING

10:30 – 12:30
PARALLEL SYMPOSIA II

10:30 – 12:30
1 - SWEET MOLECULES IN INFLAMMATION & CANCER (GLYCOSCIENCES)
Lecture hall G95
by LS2 Partners SSEP (Swiss Society of Experimental Pharmacology)
Chair: Frédérique Lisacek (SIB & University of Geneva) & Stephan von Gunten (University of Bern)

Invited speakers
10:30 – 11:00
Thierry Hennet (University of Zurich)
“Pro- and anti-inflammatory properties of milk oligosaccharides”

11:00 – 11:30
Frédérique Lisacek (SIB Swiss Institute for Bioinformatics, Geneva)
“Glycoinformatics can bridge glycomics with other -omics“

Industry speaker
11:30 – 11:50
Erdmann Rapp (GlyXera GmbH)
“Advances in the Glycoanalytical Toolbox”

Speakers from abstracts
11:50 – 12:00
Kayluz Frias Boligan (University of Bern), Poster No. 24
“Siglec-9+ and Siglec-9- natural killer (NK) cells as effectors of the immune system”

12:00 – 12:10
François Bonnardel (SIB), Poster No. 113
“Architecture and evolution of blade assembly in β-propeller lectins”
12:10 – 12:25  **Poster flash talks**
*Samara Naim* (University of Bern), Poster No. 1
“Non-apoptotic roles of the BCL-2 family member BOK”

*Timo Rey* (EPFL Lausanne), Poster No. 19
“Mitochondrial RNA Granules are organised as tiny but robust liquid droplets”

*Nastaran Ghahhari* (University of Geneva), Poster No. 26
“Genome-wide quantitative and functional decoding of estrogen receptor α-dependent enhancer activities in breast cancer”

*Xuji Liang* (University of Fribourg), Poster No. 30
“Roles of Arginase-II in vascular endothelial inflammation under hypoxic condition”

Quentin Haas (University of Bern), Poster No. 81
“Glycan-checkpoint inhibitor unleashing CD8+ T cells against cancer”

**10:30 – 12:30**
**2 - CHEMICAL BIOLOGY & DRUG DEVELOPMENT**
by the LS² Partners Swiss Chemical Society (SCS)
*Chairs: Christian Heinis* (EPF Lausanne) & *Radka Snajdrova* (Novartis Pharma AG)

**Invited speakers**
10:30 – 11:00  *Sabine L. Flitsch* (The University of Manchester, UK)
“Design and Implementation of *De Novo* Biosynthetic Pathways”

11:00 – 11:30  *Tom Ward* (University of Basel)
“Endowing Organometallic Catalysis with A Genetic Memory: Artificial Metalloenzymes”

**Industry speaker**
11:30 – 11:50  *Réka Nagy* (Promega AG)
“Monitoring Functional Mechanisms of Protein Degradation using Promega’s Toolbox”

**Speaker from abstracts**
11:50 – 12:10  *Simone Haag* (EPFL Lausanne), Poster No. 38
“Targeting STING with covalent small-molecule inhibitors”
**12:10 – 12:25**

**Poster flash talks**
- **Olesya Koloskova** (NRC Institute of Immunology FMBA of Russia, RU), Poster No. 7
  “Design of long-acting RNA drugs”
- **Johannes Rebelein** (University of Basel), Poster No. 33
  “Artificial in vivo transfer hydrogenation catalyzed by iridium complexes bound to carbonic anhydrase II”
- **Tijmen Booij** (ETH Zurich), Poster No. 37
  “High-throughput drug screening with advanced cell-based assays”
- **Vanessa Carle** (EPFL Lausanne), Poster No. 31
  “Development of a potent coagulation factor Xla inhibitor based on a new cyclic peptide format”
- **Pierre Cosson** (University of Geneva), Poster No. 6
  “Antibodies for everybody”

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**10:30 – 12:30**

**Lecture hall G60**

**3 - CHROMATIN, EPIGENETICS AND THE TRANSMISSION OF ACQUIRED STATES ACROSS GENERATION**
by LS² Section Molecular & Cellular Biosciences

**Chairs:** Susan Gasser (FMI Basel) & Francois Karch (University of Geneva)

**Invited speakers**
- **10:30 – 11:00**
  **Oded Rechavi** (Tel-Aviv University, IL)
  “Transgenerational inheritance of small RNAs in C. elegans”
- **11:00 – 11:30**
  **Petra Hajkova** (MRC London Institute of Medical Sciences, UK)
  “Epigenetic reprogramming in mouse development”
- **11:30 – 12:00**
  **Susan Gasser** (FMI Basel)
  “How active chromatin marks drive sequestration of heterochromatin in differentiated cells”

**Speaker from abstracts**
- **12:00 – 12:10**
  **Kamila Delaney** (University of Geneva), Poster No. 54
  “Local inhibition of PRC2 activity by H3.3K27M drives DNA replication defects through the JNK pathway”
12:10 – 12:25

**Poster flash talks**

**Daniel Dilg** (University of Geneva), Poster No. 39

“Uncovering the interplay between the growth-promoting transcription factor Sfp1 and the stress-responsive transcriptional activator Msn2”

**Verena Hurst** (FMI Basel), Poster No. 40

“Regulation of RNA polymerases by the checkpoint kinase Mec1 (ATR)”

**Simona Abbatemarco** (University of Geneva), Poster No. 48

“Cytoplasmic PLK-1 foci: a way to regulate PLK-1 function?”

**Manh Tin Ho** (University of Bern), Poster No. 58

“Noncanonical functions of Phenylalanyl tRNA synthetase”

**Irina Lazar** (University of Zurich), Poster No. 74

“Profiling of germ stem cells epigenome in a mouse model of epigenetic inheritance”

**Andrea Fossati** (ETH Zurich), Poster No. 99

“Insights into X-chromosome inactivation using quantitative mass spectrometry”

12:30 – 13:00

**LUNCH BREAK @ LICHTHOF, POSTER VIEWING, INDUSTRY EXHIBITION**

12:30 – 13:00

**SSEP Board Meeting**

*Room F62 (downstairs)*

*Upon invitation only*

13:00 – 14:00

**POSTER SESSION & INDUSTRY EXHIBITION @ LICHTHOF**

*Odd poster numbers: 13:00 – 13:30  
Even poster numbers: 13:30 – 14:00*
PARALLEL SYMPOSIA III

14:00 – 16:00
Lecture hall G60

1 - PUBLIC PANEL DISCUSSION
Chair: Gerlind Wallon (EMBO Deputy Director & Program Manager)

“Is merit (gender) biased? Advancement in academia” How do (gender) biases influence the evaluation and selection of scientists? How can we address (gender) biases and reduce their influence on selection processes?

In this session we would like to explore how gender biases influence the evaluation of merit and thereby the outcome of selection processes in academia and elsewhere and how these can be addressed. Gerlind Wallon will summarize the current status of the representation of women in academia. Marieke van den Brink will report on her studies that reveal how recruitment in academia is influenced by (gender) biases. Britt Dahmen will present how the cascading model, a quota system required by law, is implemented at Cologne University. This will be followed by a panel discussion.

With:

Britt Dahmen (Head of Department for Gender Equality and Diversity, University of Cologne, DE)
"E-Quality in selection processes: promising frameworks in practice"

and

Marieke van den Brink (Radboud Gender & Diversity Studies, Radboud University, Nijmegen, NL)
"Gender practices in recruitment and selection in academia"
14:00 – 16:00
Lecture hall G85

2 - REGENERATION & PATHOLOGY OF SKELETAL MUSCLE
by LS² Section Physiology
Chair: Maud Frieden (University of Geneva)

Invited speakers

14:00 – 14:30
Edgar Gomes (University of Lisbon, PT)
“Positioning of cell nucleus in the periphery of skeletal myofibers”

14:30 – 15:00
Susan Treves (University Hospital Basel)
“Extraocular muscle function is impaired in RYR3 KO mice”

Industry speaker

15:00 – 15:20
Omid Mashinchian (Nestlé Research)
“Myogenic specification of pluripotent stem cells using three-dimensional multicellular microenvironments”

Speaker from abstracts

15:20 – 15:35
Olivier Dorchies (University of Geneva), Poster No. 82
“Tamoxifen for treating fatal muscular dystrophies: an unexpected facet of a top-selling anticancer drug”

15:35 – 15:50
Poster flash talks

Sven Kappel (University of Bern), Poster No. 28
“TRPM4 controls cancer hallmark functions in colorectal cancer”

Paulina Stoklosa (University of Bern), Poster No. 69
“Possible role of TRPM4 in calcium-mediated exocytosis in colorectal cancer cell line HCT116”

Agnieszka Dyrdz (University of Geneva), Poster No. 89
“The two STIM1 splice variants, STIM1 and STIM1 long, engage differently TRPC1 in store-operated calcium entry”

Anuradha Rajendran (University of Zurich), Poster No. 95
“Role of neutral amino acid transporter LAT4 in mouse epithelia”

Axel Tollance (University of Geneva), Poster No. 112
“Determination of the quiescence/activation mechanisms of muscle stem cells”
16:00 – 16:30
COFFEE BREAK @ LICHTHOF, INDUSTRY EXHIBITION, POSTER VIEWING

16:00 – 16:30
LS² General Assembly
All members are welcome & have voting rights!

16:30 – 17:15
AWARD CEREMONIES

1. Pls of Tomorrow Award
Jury & Public Award

2. Poster Prizes

1. The Swiss Young Cell Biologist of the Year
avowed by the LS² section MCB, which consists of a free registration to the American Society for Cell Biology (ASCB) Meeting 2019, 7-11 December 2019, Washington DC, US & a travel grant of 1400 CHF to the meeting, sponsored by SCNAT.

2. Physiology Poster prize
awarded by the LS² section Physiology and realized by the Physiology department of UNIGE

3. The poster prize of the Swiss Society of Experimental Pharmacology (SSEP)

4. Two FEBS letters poster prizes
given to a PhD student or an early-stage post-doc presenting unpublished work that fits within the scope of FEBS Letters - “basic research studies that are novel, advance knowledge, and provide mechanistic insights”

5. The Swiss 3R Competence Centre poster prize
The prize will be awarded for a poster presenting innovative contributions for the Replacement, Reduction or Refinement of animal experimentation (the principles of 3R).
3. Exhibition Lottery draw

Special thanks to the sponsors of our Exhibition Lottery!

1. PRIZE (worth 500 CHF) - A gift voucher by STA Travel of 500 CHF
   sponsored by Beckman Coulter

2. PRIZE (worth 400 CHF)
   An Apple iPad
   sponsored by BioConcept

3. PRIZE (worth 300 CHF)
   Noise-cancelling headphones
   sponsored by Tecan

4. PRIZE (worth 200 CHF)
   A SBB travel voucher of 200 CHF
   sponsored by IGZ Instruments

5. PRIZE (worth 100 CHF)
   A voucher for the Orell Füssli book store of 100 CHF
   sponsored by MACHEREY-NAGEL

16:45 – 17:15
PLENARY LECTURE IV
Lecture Hall G30

THE LELIO ORCI AWARD LECTURE
Jean-Claude MARTINOU (University of Geneva)
Pyruvate metabolism and mitochondrial gene expression: two facets of mitochondrial biology with implications for neuropathologies and cancer“

17:15 – 18:00
PLENARY LECTURE V
Lecture Hall G30

Anne BERTOLOTTI
(MRC Laboratory of Molecular Biology, Cambridge, UK)
“Power and benefit of selective phosphatase inhibitors for neurodegenerative diseases”

The deposition of misfolded proteins is a defining feature of many age-dependent human diseases, including the increasingly prevalent neurodegenerative diseases. Why misfolding-prone proteins accumulate in aged cells remains largely unclear. Cells normally strive to ensure that proteins
get correctly folded and have powerful and sophisticated protein quality control mechanisms to maintain protein homeostasis under adverse conditions. However, with age, the cellular defence systems against misfolded proteins gradually fail, leading to the accumulation of misfolded proteins with devastating consequences for cells and organisms. In principle, improving the cells’ ability to deal with misfolded proteins should represent a generic approach to reduce pathology in diverse protein misfolding diseases. My lab has identified powerful strategies to help cells survive when protein quality control fails and implemented some of these strategies in mice. Exploiting the current knowledge on protein quality control systems, we have identified a small drug-like molecule that safely boosts the natural defence system against misfolded proteins. Our work demonstrates that generic approaches aimed at helping cells to survive protein quality control failures can be useful to prevent protein misfolding diseases, including the devastating neurodegenerative diseases.

The small molecules we have identified selectively inhibit a regulatory subunit of a serine/threonine phosphatase controlling the termination of a proteostatic pathway, an interesting finding because phosphatases were previously thought to be undruggable. We have expanded on this idea and developed assays to selectively inhibit regulatory subunits of phosphatases. The assays are versatile and in principle, generically applicable to any phosphatases. This work has broad relevance because there are hundreds of phosphatases that could be inhibited using the same paradigm consisting of targeting their regulatory subunits. This opens up a broad range of possibilities to manipulate cellular function for therapeutic benefit.
POSTERS

SORTED BY PRIMARY CATEGORY NAME AND POSTER NUMBER & WITHIN CATEGORIES BY FAMILY NAME

*= last author(s)  °= shared authorships

1
Apoptosis
Cancer Biology

Non-apoptotic roles of the BCL-2 family member BOK

Naim, Samara
Samara Naim (1), Yuniel Fernandez-Marrero (1), Daniel Bachmann (1), Thomas Kaufmann (1)*
(1) University of Bern, Institute of Pharmacology

2
Autophagy

Dissecting the role of autophagy in normal and malignant B cells

Arambasic, Miroslav
Miroslav Arambasic (1), Urban Novak (2)*
(1) University of Bern, Department for Biomedical Research
(2) Inselspital, Universitätsspital Bern, Universitätsklinik für Medizinische Onkologie

3
Autophagy

The Legionella pneumophila effector RavZ as a tool to unravel the key role of autophagy during the infection cycle of Dictyostelium discoideum by Mycobacterium marinum

4
Autophagy
Cancer Biology

DMTF1β-induced autophagy enhances migration and invasion of EMT-primed breast cancer cells

Niklaus, Nicolas
Nicolas Niklaus (1), Magali Humbert (1)*, Félixe Janser (1)*, Mario Tschan (1)*
(1) Institute of Pathology, University of Bern

5
Biochemistry
Microbiology

Interaction between ESCRT and autophagy pathways in membrane damage repair

Assoumou, Kevin
Kevin Assoumou (1), Ana T. López Jiménez (1)*, Elena Cardenal-Muñoz (1)*, Thierry Soldati (1)*
(1) University of Geneva, Biochemistry
6
Biochemistry
Animal Welfare

Antibodies for everybody
Cosson, Pierre
Pierre Cosson (1)*
(1) University of Geneva, Faculty of Medicine

7
Biochemistry
Drug Discovery

Design of long-acting RNA drugs
Koloskova, Olesya
Olesya Koloskova (1), Anastasia Nosova (1), Musa Khaitov (1)
(1) NRC Institute of Immunology FMBA of Russia, Nanobiomedical Technologies Department

8
Biochemistry
Structural Biology

How do primases start the primer synthesis? Insights from an archaeoeukaryotic primase of a plasmid
Lipps, Georg
Georg Lipps (1), Frederic Allain (2), Jean Christophe Devillier (1), Boudet Julien (2)
(1) FHWN, ICB
(2) ETHZ

9
Biochemistry
Molecular and Cellular Biosciences

Function of the iron-sulphur cluster in the nuclease/helicase DNA2
Mariotti, Laura
Laura Mariotti (1), Giulia Brunoldi (2), Sebastian Wild (1), Richard Lutz (1), Kerstin Gari (1)*
(1) University of Zurich, Institute of Molecular Cancer Research
(2) ETH Zurich

10
Biochemistry
Molecular and Cellular Biosciences

Temperature-dependent proteome profiling unveils a role for Puf6 in pre-60S biogenesis
Oplova, Michaela
Michaela Oplova (1)*, Stefan Gerhardy (1)*, Ludovic Gillet (2)*, Richard Börner (3)*, Rob van Nues (4)*, Ahmed Moursy (5)*, Alexander Leitner (2)*, Martin Altwater (1)*, Frederic H. Allain (5)*, Sander Grannemann (4)*, Ruedi Abersold Aebersold (2)*, Roland Sigel (6)*, Vikram G. Panse (7)*
(1) Institute of Biochemistry, ETH Zürich, Department of Biology
(2) Institute of Molecular Systems Biology, ETH Zürich, Department of Biology
(3) Institute of Inorganic Chemistry, University of Zürich, Department of Chemistry
(4) Center for Synthetic and Systems Biology, University of Edinburgh, University of Edinburgh
(5) Institute of Molecular Biology and Biophysics, ETH Zürich, Department of Biology
(6) Institute of Inorganic Chemistry, University of Zürich, Department of Biology
(7) Institute of Medical Microbiology, Univerzity Zürich, University of Zürich

11
Biochemistry, Structural Biology

Cellular control of Whi3 aggregation and its age-dependent malfunction
12 Biochemistry
Proteomics

The impact of chemical modulators on α-Synuclein structure

Stalder, Patrick
Patrick Stalder (1), Liliana Malinovska (1)*, Paola Picotti (1)*
(1) ETH Zürich, Biology

13 Biochemistry
Molecular and Cellular Biosciences

The role of UNC93B1 interaction with STIM1 and STIM2 in calcium signaling.

Wang, Wen-An
Wen-An Wang (1)*, Nicholas Demaurex (1)*
(1) University of Geneva, Cell Physiology and Metabolism

14 Biochemistry
Molecular and Cellular Biosciences

Development of a single-molecule pull-down assay to analyze the composition of protein-nucleic acid complexes

Zsok, Janka
Janka Zsok (1), Karsten Weis (1), Elisa Dultz (1)*
(1) ETHZ, IBC

15 Biophysics

Biological nanopore for single molecular sensing

Cao, Chan
Chan Cao (1)*, Nuria Cirauqui (2)*, Matteo Dal Peraro (1)*
(1) Laboratory for Biomolecular Modeling, Institute of Bioengineering, School of Life Sciences, EPFL
(2) Department of Pharmaceutical Biotechnology, Universidade Federal do Rio de Janeiro

16 Biophysics
Biochemistry

NMR spectroscopic investigation of protein structure, function and dynamics in context of macromolecular crowding applied on the model system CspB

Köhn, Birgit
Birgit Köhn (1), Michael Kovermann (1)
(1) Fachbereich Chemie & Research School Chemical Biology (KoRS-CB), University of Konstanz, DE

18 Biophysics
Molecular and Cellular Biosciences

Membrane bending energy and tension govern mitochondrial division

Mahecic, Dora
Dora Mahecic (1)*, Lina Carlini (1)*, Tatjana Kleele (1), Adai Colom (2), Antoine Goujon (2), Stefan Matile (2), Aurelien Roux (2), Suliana Manley (1)*
(1) EPFL, Institute of Physics
Mitochondrial RNA Granules are organised as tiny but robust liquid droplets

Rey, Timo
Timo Rey (1), Emilie Cuillery (2)*, Sofia Zaganelli (3)*, Suliana Manley (1)*, Jean-Claude Martinou (3)*
(1) EPFL, IPHYS
(2) EPFL, SV
(3) Université Genève

Functional in vivo screening of novel oncogenic suppressors/enhancers in zebrafish melanoma model

Banik, Ishani
Ishani Banik (1)
(1) Universitätsplex Zurich, Dermatology

Transient receptor potential melastatin 4 plays are role in cell adhesion, migration and proliferation of prostate cancer cells

Borgström, Anna
Anna Borgström (1)*, Barbara Hauert (1), Christine Peinelt (1)*

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

Precision Drugs: Strategy to Minimize Side Effects of PI3K Inhibitor Cancer Therapy

Borsari, Chiara
Chiara Borsari (1)*, Erhan Keles (1)*, Denise Rageot (1)*, Matthias P. Wymann (1)*
(1) University of Basel, Department of Biomedicine

Therapeutic resistance in leukaemia: implication of the tyrosine kinase c-kit and integrin crosstalk

Chebbi, Seimia
Seimia Chebbi-Mathlouthi (1), Bernhard Wehrle-Haller (1)*
(1) UNIGE, CMU, PHYM department, Department of Cell Physiology and Metabolism

Siglec-9+ and Siglec-9- natural killer (NK) cells as effectors of the immune system.

Frias Boligan, Kayluz
Kayluz Frias Boligan (1), Christine Gallasz (1), Lukas Muerner (1), Christoph Schneider (1), Marc Zurcher (1), Stephan von Gunten (1)*
Spatio-temporal oncogenic signalling in a breast cancer epithelial community

Gagliardi, Paolo Armando
Paolo Armando Gagliardi (1), Marc-Antoine Jacques (1), Maciej Dobrzynski (1), Yannik Blum (1), Pascal Ender (1), Coralie Dessauges (1), Alberto Mattei (1), Olivier Pertz (1)
(1) University of Bern, Institute of Cell Biology

Genome-Wide Quantitative and Functional Decoding of Estrogen Receptor $\alpha$-dependent Enhancer Activities in Breast Cancer

Ghahhari, Nastaran
Nastaran Ghahhari (1), Nicolas Hulo (2)*, Didier Picard (1)°
(1) Université de Genève, Département de Biologie Cellulaire
(2) Université de Genève, Institute of Genetics and Genomics of Geneva

Beneficial effect of combining HER2 and autophagy inhibition in the treatment of esophageal adenocarcinoma cells

Janser, (Ariane) Félice
Félice (Ariane) Janser (1), Olivia Adams (2)*, Mario P. Tschan (3)*
(1) University of Bern, Institute of Pathology
(2) University of Bern, Institute of Pharmacology
(3) University of Bern, Institute of Pathology

TRPM4 controls cancer hallmark functions in colorectal cancer

Kappel, Sven
Sven Kappel (1)*, Paulina Stoklosa (1)*, Barbara Hauert (1), José Alberto Galván Hernández (2), Inti Zlobec (2), Christine Peinelt (1)*
(1) University of Bern, Institute for Biochemistry and Molecular Medicine
(2) University of Bern, Institute of Pathology Translational Research Unit

Exploring the interactome of ADAM17 in the tumor microenvironment and its role for radiation resistance

Knobel, Philip
Philip Alexander Knobel (1), Martin Pruschy (1)
(1) Institute of Physiology, University of Zurich

Roles of Arginase-II in vascular endothelial inflammation under hypoxic condition

Kappel, Sven
Sven Kappel (1)*, Paulina Stoklosa (1)*, Barbara Hauert (1), José Alberto Galván Hernández (2), Inti Zlobec (2), Christine Peinelt (1)*
(1) University of Bern, Institute for Biochemistry and Molecular Medicine
(2) University of Bern, Institute of Pathology Translational Research Unit
Liang, Xiujie
Xiujie Liang (1), Prakash Arullampalam (1), Xiu-Fen Ming (1), Zhihong Yang (1)
(1) University of Fribourg, Department of Endocrinology, Metabolism, and Cardiovascular System

30B
Cancer Biology

Dual knockout of RAP1GDS1 and RhoA is synthetic lethal in KRAS-driven non-small cell lung cancer

Kostyrko, Kaja
(1) Kaja Kostyrko, (2) Kyuho Han, (3) Marcus Kelly, (2) Edwin Jeng, (2) David Morgens, (2) Michael Bassik, (3) Peter Jackson, (1) E. Alejandro Sweet-Cordero
(1) Helen Diller Family Comprehensive Cancer Center, University of California San Francisco, San Francisco, CA 94143, USA
(2) Department of Genetics, Stanford University, Stanford, California, USA
(3) Baxter Laboratory for Stem Cell Biology, Stanford University School of Medicine, Stanford, California, USA

31
Chemical Biology
Cardiovascular Biology

Development of a potent coagulation factor XIa inhibitor based on a new cyclic peptide format

Carle, Vanessa
Vanessa Carle (1)*, Sangram Kale (1), Camille Villequey (1), Xu-Dong Kong (1), Christian Heinis (1)*
(1) EPFL, Institute of Chemical Sciences and Engineering

32
Chemical Biology
Biochemistry

Site-specific photo-uncaging to study local sphingolipid metabolism

Feng, Suihan
Suihan Feng (1), Takeshi Harayama (1), Nicolas Winssinger (2), Howard Riezman (1)*
(1) UNIGE, Biochemistry
(2) UNIGE, Organic Chemistry

33
Chemical Biology
Biochemistry

Artificial in vivo transfer hydrogenation catalyzed by iridium complexes bound to carbonic anhydrase II

Rebelein, Johannes
Johannes Rebelein (1), Yoann Cotelle (1)*,
Thomas Ward (1)*
(1) University of Basel, Chemie

34
Computational Biology
Biochemistry

PaccMann: Prediction of anticancer compound sensitivity with multimodal attention-based neural networks

Born, Jannis
Ali Oskooei (1)*, Jannis Born (2)*, Matteo Manica (3)*, Vigneshwari Subramanian (4), Julio Sáez-Rodríguez (4), María Rodríguez Martínez (5)*
(1) IBM Research, Computational Systems Biology group
(2) IBM Research, ETH Zürich, University of Zürich, Computational Systems Biology group
(3) IBM Research, ETH Zürich, Computational Systems Biology group
(4) RWTH Aachen University
(5) IBM Research
Machine learning-based mining of ERK and AKT biosensor time-series reveals new signatures of oncogenic signaling

Jacques, Marc-Antoine
Marc-Antoine Jacques (1), Paolo Gagliardi (1), Maciej Dobrzynski (1), Olivier Pertz (1)
(1) University of Bern, IZB

Characterization of two newly identified nuclear encoded mitochondrial proteins

Mary, Camille
Camille Mary (1)*, Paula Duek Roggl (2), Insaf Fkih M’Hamed (1), Amos Bairoch (1), Lydie Lane (2)*
(1) University of Geneva, Microbiology and Molecular Medicine
(2) SIB-Swiss Institute of Bioinformatics, CALIPHO

High-throughput drug screening with advanced cell-based assays

Booij, Tijmen
Tijmen Booij (1), David Keller (1), Christian Hirt (2), Doreen Taube (2), Gerald Schwank (2), Christian Stirnimann (1)*
(1) ETH Zürich, NEXUS Personalized Health Technologies
(2) ETH Zürich, Stem Cell Biology & Disease Modeling - Group Schwank

Targeting STING with covalent small-molecule inhibitors

Haag, Simone
Simone M. Haag (1)*, Muhammad F. Gulen (2)*, Luc Reymond (3), Antoine Gibelin (3), Laurence Abrami (2), Alexiane Decout (2), Michael Heymann (2), F. Gisou van der Goot (2), Gerardo Turcatti (3), Rayk Behrendt (4), Andrea Ablasser (2)*
(1) EPFL, Lausanne, Global Health Institute
(2) EPFL, Lausanne, Global Health Institute
(3) EPFL, Lausanne, Bimolecular Screening Facility
(4) Technical University Dresden, Institute for Immunology

Uncovering the interplay between the growth-promoting transcription factor Sfp1 and the stress-responsive transcriptional activator Msn2

Dilg, Daniel
Daniel Dilg (1), Benjamin Albert (1), Maria Jessica Bruzzone (1), David Shore (1)*
(1) University of Geneva, Department of Molecular Biology

A fast and reliable method for detecting base editing

Hampe, Cornelia
Cornelia Hampe (1), Montse Morell (2), Tatiana Garachtchenko (2), Patrick Martin
(2), Baz Smith (2), Michael Haugwitz (2), and Andrew Farmer (2)*
(1) Takara Bio Europe SAS, 78100 Saint-Germain-en-Laye, France
(2) Takara Bio USA, Inc., Mountain View, CA 94043, USA
*Corresponding author

40 Genetics
Molecular and Cellular Biosciences

Regulation of RNA polymerases by the checkpoint kinase Mec1 (ATR)

Hurst, Verena
Verena Hurst (1), Kenji Shimada (1)*, Nicole Hustedt (2)*, Jerome Poli (3)*, Susan Gasser (1)*
(1) Friedrich Miescher Institute
(2) Lunenfeld-Tanenbaum Institute
(3) CNRS Montpellier

42 Genetics

Higher-order Suppression Interactions in Yeast

Lopes, Andreia
Andreia Lopes (1), Jolanda van Leeuwen (1)
(1) University of Lausanne, Center for Integrative Genomics (CIG)

43 Genetics
Drug Discovery

Functional mapping of yeast genomes by saturated transposition: SATAY, a powerful tool for the yeast geneticist.

Michel, Agnès
Agnès Michel (1), Riko Hatakeyama (2), Philipp Kimmig (1), Sabine van Schie (1), Meret Arter (1), Matthias Peter (1), Joao Matos (1), Claudio de Virgilio (2), Benoît Kornmann (1)
(1) ETH Zurich, Institute of Biochemistry
(2) University of Fribourg, Department of Biology

44 Infectious Diseases
Virology

Towards Understanding Persistent Human Adenovirus Infections

Sequeira, Daniela
Daniela Sequeira (1), Vibhu Prasad (2), Maarit Suomalainen (2), Urs F. Greber (2)
(1) University of Zurich, Department of Molecular Life Sciences
(2) University of Zurich, Department of Molecular Life Sciences

45 Microbiology
Systems Biology

Single cell analysis of the filamentous growth pathway in Saccharomyces cerevisiae

Jager, Nienke
Nienke Jager (1), Serge Pelet (1)*
(1) University of Lausanne, Department of Fundamental Microbiology

46 Microbiology
Infectious Diseases

Improved targeting of intracellular and drug-resistant Staphylococcus aureus by fusion of peptidoglycan hydrolases to cell-penetrating peptides

Röhrig, Christian
Christian Röhrig (1), Dominique Lorgé (1)*, Samuel Luterbacher (1), Preeda
Phothaworn (2)°, Christopher Schefer (1)°, Nadja Leimer (3)°, Anna Sobieraj (1)°, Léa Zinsli (1)°, Fritz Eichenseher (1)°, Yang Shen (1)°, Sunee Korbsrisate (2)°, Annelies S. Zinkernagel (3)°, Martin J. Loessner (1)°, Mathias Schmelcher (1)*
(1) ETH Zürich, Institute of Food, Nutrition and Health
(2) Mahidol University Bangkok, Faculty of Medicine, Siriraj Hospital
(3) University Hospital Zurich, Division of Infectious Diseases and Hospital Epidemiology

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Microbiology
Biochemistry

Bacteriophage predation selects for non-virulence in Listeria monocytogenes

Sumrall, Eric
Eric Sumrall (1), Yang Shen (1), Samy Boulos (1), Samuel Kilcher (1), Didier Cabanes (2), Bernd Wollscheid (3), Angelika Gründling2 (4), Marc Lecuit (5), Martin Loessner (1)
(1) ETH Zurich, Institute of Food, Nutrition and Health
(2) IBMC - Institute for Molecular and Cell Biology, University of Porto, Porto, Portugal
(3) ETH Zurich, Institute of Molecular Systems Biology
(4) Imperial College London, 2. Section of Microbiology and MRC Centre for Molecular Bacteriology and Infection
(5) Institut Pasteur, Biology of Infection Unit

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Molecular and Cellular Biosciences

Cytoplasmic PLK-1 foci: a way to regulate PLK-1 function?

Abbatemarco, Simona

Simona Abbatemarco (1)°, Luca Cirillo (1)°, Françoise Schwager (1), Monica Gotta (1)*
(1) University of Geneva, PHYM Department

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Molecular and Cellular Biosciences

Physiology

Posttranslational control of integrins and integrin-mediated cell adhesions

Bachmann, Michael
Michael Bachmann (1)°, Kenza Fouad (1)°, Marta Ripamonti (1)°, Bernhard Wehrle-Haller (1)*
(1) Université de Genève, CMU, Cell Physiology and Metabolism

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Molecular and Cellular Biosciences

Genetics

Function of glutamylation of α-tubulin in regulating RNA transport, and development of the ovary in Drosophila.

Bao, Mengjing
Mengjing Bao (1), Ruth Dörig (1), Dirk Beuchle (1), Vazquez Pianzola Maria Paula (1), Beat Suter (1)
(1) Institute of Cell Biology, University of Bern

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Molecular and Cellular Biosciences

Physiology

The effects of astrocyte HIF-1 induction on endothelial cell quiescence and metabolism at the blood-brain barrier.

Baumann, Julia
Julia Baumann (1), Sheng-Fu Huang (1), Omolara O. Ogunshola (1)
52 Molecular and Cellular Biosciences

Cell fate regulation of spindle assembly

Bondaz, Alexandra
Alexandra Bondaz (1), Patrick Meraldi (1), Monica Gotta (1)
(1) University of Geneva, Cell Physiology and Metabolism Department

53 Molecular and Cellular Biosciences

Prolonged L3 phase in β-PheRS mutants

Brunssen, Dominique
Dominique Brunßen (1), Manh Tin Ho (1), Jiongming Lu (2), Beat Suter (1)*
(1) University of Bern, IZB
(2) Max Planck Institute

54 Molecular and Cellular Biosciences

Genetics

Local inhibition of PRC2 activity by H3.3K27M drives DNA replication defects through the JNK pathway.

Delaney, Kamila
Kamila Delaney (1), Maude Strobino (1)*, Joanna Wenda (1)*, Florian Steiner (1)*
(1) University of Geneva, Molecular Biology

55 Molecular and Cellular Biosciences

Infectious Diseases

Adenovirus protein V – A key factor for capsid stability and genome release

Gomez, Alfonso
Alfonso Gomez (1), Michael Bauer (1), Silvio Hemmi (1), Urs Greber (1)
(1) University of Zurich, Department of Molecular Life Sciences

56 Molecular and Cellular Biosciences

What is the role of WDR62 in mitosis?

Guerreiro, Amanda
Amanda Guerreiro (1), Patrick Meraldi (1)*
(1) UNIGE, PHYM

57 Molecular and Cellular Biosciences

Biochemistry

Regulation of mRNA export in vivo by the DEAD-box ATPase Dpb5

Heinrich, Stephanie
Stephanie Heinrich (1), Maria Hondele (1), Désirée Marchand (1), Carina Derrr (1), Pascal Vallotton (1), David Grunwald (2), Ben Montpetit (3), Karsten Weis (1)*
(1) ETH Zurich, Institute of Biochemistry
(2) University of Massachusetts Medical School, Worcester, USA, RNA Therapeutics Institute
(3) College of Agricultural and Environmental Sciences, UC Davis, USA, Department of Viticulture and Enology
58 Molecular and Cellular Biosciences

Noncanonical functions of Phenylalanyl tRNA synthetase

Ho, Manh Tin
Tin Manh Ho (1), Dominique Brunssen (1), Jiongming Lu (2), Beat Suter (1)*
(1) University of Bern
(2) Max Planck Institute for Biology of Ageing

59 Molecular and Cellular Biosciences Biochemistry

Targeting blood-brain barrier impairment as a therapeutic strategy: Glutathione crosstalk between astrocytes and endothelial cells

Huang, Sheng-fu
Sheng-Fu Huang (1), Sabrina Engelhardt (1)*, Omolara O. Ogunshola (1)*
(1) Veterinary Physiology

60 Molecular and Cellular Biosciences Genetics

Fine molecular mechanism of gene repression by antisense non coding transcription

Kaur, Jatinder
Jatinder Kaur Gill (1), Julien Soudet (1), Francoise Stutz (1)*
(1) University of Geneva, Department of Cell Biology

61 Molecular and Cellular Biosciences Genetics

Targeting Principles of Drosophila Dosage Compensation revealed by reconstitution in mammalian cells

Keller Valsecchi, Claudia
Claudia Isabelle Keller Valsecchi (1), M. Felicia Basilicata (1)*, Plamen Georgiev (1)*, Aline Gaub (1)*, Giuseppe Semplicio (1)*, Pouria Dasmeh (1)*, Janine Seyfferth (1)*, Asifa Akhtar (1)*
(1) Max-Planck-Institute of Immunobiology & Epigenetics, Chromatin Regulation

62 Molecular and Cellular Biosciences Proteomics

Using neXtProt and other bioinformatics resources to identify human uncharacterized proteins potentially involved in male reproduction

Duek, Paula
Paula Duek (1), Gustavo L. Verón (2), Mónica H. Vazquez-Levin (2) and Lydie Lane (1,3)
(1) CALIPHO group, SIB Swiss Institute of Bioinformatics, CMU, Michel Servet 1, 1211 Geneva 4
(2) IBYME Instituto de Biología y Medicina Experimental (CONICET-FIBYME), Vuelta de Obligado 2490, C1428ADN-Buenos Aires, Argentina
(3) Department of Microbiology and Molecular Medicine, Faculty of Medicine, University of Geneva, CMU, Michel Servet 1, 1211 Geneva 4
Conserved microbial restriction factors in Dictyostelium discoideum cell-autonomous immunity

Raykov, Lyudmil
Lyudmil Raykov (1), Thierry Soldati (1)*
(1) UNIGE, Biochemistry

LSL-1, a potential new regulator of germ line development in C. elegans

Rodriguez Crespo, David
David Rodriguez-Crespo (1), Sabine Caloz (1), Véronique Charriere (1), Chantal Wicky (1)*
(1) University of Fribourg, Zoology

One sperm for all – a novel experimental strategy opens new horizons in epigenetic inheritance

Roszkowski, Martin
Martin Roszkowski (1), Irina Lazar-Contes (1), Niharika Gaur (1), Francesca Manuelia (1), Dalila Korkmaz (2), Mark Ormiston (2), Johannes Vom Berg (2), Isabelle Mansuy (1), Johannes Bohacek (3)*
(1) University of Zurich and ETH Zurich, Brain Research Institute and Institute for Neuroscience
(2) University of Zurich, Institute of Laboratory Animal Science
(3) ETH Zurich, Institute for Neuroscience and Center for Neuroscience Zurich

S100A4, a key player in plaque stabilization?

Sakic, Antonija
Antonija Sakic (1), Noona Ambartsumian (2), Jörg Klingelhöfer (2), Brenda Kwak (1), Mariam Grigorian (2), Marie-Luce Bochaton-Piallat (1)*
(1) Faculty of Medicine, University of Geneva, Geneva, Switzerland, Department of Pathology and Immunology
(2) Institute of Cancer Biology, Danish Cancer Society, Copenhagen, Denmark, Department of Molecular Cancer Biology

Characterization of PLEKHA5 and PLEKHA6 as new interactors of the junctional adaptor protein PDZD11

Sluysmans, Sophie
Sophie Sluysmans (1), Flavio Ferreira (1), Amina Boukhatemi (1), Lionel Jond (1), Sandra Citi (1)*
(1) Université de Genève, Département de Biologie Cellulaire

Possible role of TRPM4 in calcium-mediated exocytosis in colorectal cancer cell line HCT116

Stoklosa, Paulina
Paulina Stoklosa (1), Barbara Hauert (1), Sven Kappel (1), Christine Peinelt (1)*
(1) Institute of Biochemistry and Molecular Medicine, National Center of Competence in Research NCCR TransCure, University of Bern
The Blood-Brain Barrier as a stroke treatment: Pericyte-mediated HIF-1 signaling regulates barrier function and outcome

Tsao, Chih-Chieh
Chih-Chieh Tsao (1), Omolara Ogunshola (1)*, Yurena Garcia (1)*, Nicole Kachappilly (1)*
(1) University of Zurich, Institute of Veterinary Physiology

Myosin 1b regulates insulin-induced Akt/PKB activation through nuclear PTEN

Xiong, Yuyan
Yuyan Xiong (1), Diogo Ladeiras (1), Zhihong Yang (1), Xiu-Fen Ming (1)
(1) University of Fribourg, Department of Endocrinology, Metabolism and Cardiovascular System

Characterization of Drosophila melanogaster larval nervous system at single-cell resolution

Brunet Avalos, Clarisse
Clarisse Brunet Avalos (1), Remy Bruggmann (2), Simon Sprecher (1)*
(1) University of Fribourg, Zoology
(2) University of Bern, Bioinformatics

Determinants of CMK-1 subcellular localization in C. elegans nociceptor neurons: analysis of a key sensory adaptation mechanism

Ippolito, Domenica
Domenica Ippolito (1)*, Lola Hostettler (1)*, Dominique Glauser (1)*
(1) University of Fribourg, Department of Biology

Profiling of Germ Stem Cells Epigenome in a Mouse Model of Epigenetic Inheritance

Lazar, Irina
Irina Lazar-Contes (1), Pierre-Luc Germain (1), Deepak Tanwar (1), Martin Roszkowski (1), Gretchen van Steenwyk (1), Isabelle Mansuy (1)*
(1) Brain Research Institute/UZH, Institute for Neuroscience/ETH, Faculty of Medicine/UZH, Department of Health Sciences and Technology/ETH

Non-invasive volumetric mapping of amyloid pathology in the whole mouse brain by non-invasive photoacoustic tomography

Ni, Ruiqing
Ruiqing Ni (1), Daniel Kirschenbaum (2), Fabian Voigt (3), Markus Vaas (1), Alessia Villios (4), Fritjof Helmchen (3), Paolo
Arosio (4), Adrianno Aguzzi (2), Jan Klohs (1)*
(1) ETH Zurich & University of Zurich, Institute for Biomedical Engineering
(2) UniversitätsSpital Zurich, Neuropathology
(3) University of Zurich, Brain Research institute
(4) ETH Zurich, Institute for Chemical and Bioengineering, Department of Chemistry,

76 Neuroscience
Biochemistry

Effect of light on per1 expression in the perihabenular region and mood related disorders

Olejniczak, Iwona
Iwona Olejniczak (1), Urs Albrecht (1)*
(1) University of Fribourg, Biology

77 Neuroscience
Genetics

Dissecting calcium transient mechanisms in a C. elegans thermal nociceptor

Saro, Gabriella
Gabriella Saro (1), Filipe Marques (1), Karl Emanuel Busch (2), Dominique Glauser (1)*
(1) University of Fribourg, Biology
(2) University of Edinburgh, Centre for Integrative Physiology

78 Neuroscience
Molecular and Cellular Biosciences

Tuning neuronal translation: a selective program for ribosome homeostasis

Singh, Meha
Meha Singh (1)*, Peter Scheiffele (1)*
(1) Biozentrum, University of Basel, Neurobiology

79 Neuroscience
Genetics

Sleep characteristics and glymphatic system changes driven by circadian clock gene Per2

Wendrich, Katrin
Katrin Wendrich (1), Urs Albrecht (1)
(1) University of Fribourg, Department of Biology, Biochemistry

80 Pharmacology

Altered neutrophil cell death modulation and anti-carbohydrate repertoire of modified IVIg

Graeter, Stefanie
Stefanie Graeter (1), Christoph Schneider (1)*, David F. Smith (2)*, Frank Seibold (3)*,
Fritz Daudel (4)*, Nikhil Yawalkar (5)*,
Richard D. Cummings (6)*, Anastas Pashov (7)*, Tchavdar Vassilev (7)*, Stephan von Gunten (1)*
(1) Institute of Pharmacology, Department of Medicine, University of Bern, Bern, Switzerland
(2) Consortium for Functional Glycomics, Department of Biochemistry, Emory University School of Medicine, Atlanta, USA
(3) Gastroenterology, Hospital Lindenhof, Inselgruppe AG, University of Bern, Bern, Switzerland
(4) Division of Intensive Care, Hospital Tiefenau, Inselgruppe AG, University of Bern, Bern, Switzerland
(5) Department for Dermatology, Bern University Hospital, University of Bern, Bern, Switzerland
81 Pharmacology Cancer Biology

Glycan-Checkpoint Inhibitor unleashing CD8+ T cells against Cancer

Haas, Quentin
Quentin Haas (1), Kayluz Frias Boligan (1), Camilla Jandus (2), Christoph Schneider (1), Cedric Simillion (3), Michal Stanczak (4), Monika Haubitz (5), Morteza Jafari (6), Alfred Zippelius (4), Gabriela Baerlocher (5), Heinz Läubli (7), Robert Hunger (6), Pedro Romero (8), Hans-Uwe Simon (9), Stephan von Gunten (9)*
(1) institut of Pharmacology, university of Bern
(2) 2 Department of Oncology UNIL CHUV, University of Lausanne
(3) Department for BioMedical Research (DBMR), University of Bern
(4) Cancer Immunology Laboratory, Department of Biomedicine, University Hospital Basel
(5) Experimental Hematology, Department of BioMedical Research, University of Bern
(6) Department of Dermatology, Inselspital, Bern University Hospital, Bern, University of Bern
(7) 4 Cancer Immunology Laboratory, Department of Biomedicine, University Hospital Basel
(8) Department of Oncology UNIL CHUV, University of Lausanne, Lausanne
(9) Institute of Pharmacology, University of Bern

82 Pharmacology Drug Discovery

Tamoxifen for treating fatal muscular dystrophies: an unexpected facet of a top-selling anticancer drug

Dorchies, Olivier
Olivier Dorchies (1)*, Elinam Gayi (1)*, Laurence Neff (1)*, Hesham Ismail (1)*, Marta Sierra (1)*, Xenia Massana-munoz (2)*, Thomas Mercier (3)*, Laurent Decosterd (3)*, Jocelyn Laporte (2)*, Belinda Cowling (2)*, Dirk Fischer (4)*, Leonardo Scapozza (1)*
(1) University of Geneva, School of Pharmaceutical Sciences
(2) University of Strasbourg, Institut de Génétique et de Biologie Moléculaire et Cellulaire
(3) Lausanne University Hospital, Clinical Pharmacology
(4) University of Basel, Children’s Hospital

83 Pharmacology Drug Discovery

Renal effects of FOR011A and FOR811A ruthenium complexes on isolated kidney perfusion model

Fernandes de Souza, João Paulo
João Paulo Fernandes de Souza (1), Natacha Tereza Queiros Alves (1)*, Antonio Rafael Coelho Jorge (1)*, Pedro Henrique Sá Costa (1 João Alison de Moraes Silveira (1)*, Paula Leticia Braga E Silva (1)*, Francisco Assis Nogueira Júnior (1)*, Aline Diogo Marinho (1)*, Luiz Gonzaga de França Lopes (1)*, Florêncio Sousa Gouveia Júnior (1)*, Roberta Jeane Bezerra Jorge (1)*, Helena Serra Azul Monteiro (1)*
A combinatorial drug screen for novel therapeutic approaches against ERα-positive breast cancer and endocrine resistance

Hany, Dina
Dina Hany (1), Patrycja Nowak-Sliwinska (2)*, Leonardo Scapozza (2)*, Didier Picard (1)*
(1) University of Geneva, Cell Biology
(2) University of Geneva, Pharmaceutical Sciences

Disentangling host and microbiome contributions to drug pharmacokinetics and toxicity

Zimmermann-Kogadeeva, Maria
Zimmermann-Kogadeeva, Maria* (1), Michael Zimmermann* (1), Rebekka Wegmann (1, 2), Andrew L. Goodman (1)
(1) Department of Microbial Pathogenesis and Microbial Sciences Institute, Yale University School of Medicine, New Haven, CT 06536, USA
(2) Present address: Department of Biology, Institute of Molecular Systems Biology, ETH Zurich, Switzerland

From worms to humans and from proteins to organism: the role of UBAP2L in cell division and RNA translation

Cirillo, Luca
Luca Cirillo (1), Simona Abbatemarco (1)*, Adeline Cieren (1), Françoise Schwager (1), Monica Gotta (1)
(1) University of Geneva, PHYM
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Physiology
Pharmacology

Amylin Signalling in POMC Neurons Controls Energy Metabolism and Activity
Coester, Bernd
Bernd Coester (1), Thomas A. Lutz (1), Christelle Le Foll (1)
(1) University of Zurich, Institute of Veterinary Physiology

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Physiology

The two STIM1 splice variants, STIM1 and STIM1 long, engage differently TRPC1 in store-operated calcium entry.

Dyrda, Agnieszka
Agnieszka Dyrda (1), Maud Frieden (1)*
(1) University of Geneva, Department of Cell Physiology and Metabolism

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Physiology
Systems Biology

Morphological and CT-based functional investigation of the glenohumeral joint in human body donors

Eppler, Elisabeth
Marc Kissling (1), Nabil Serrano (2)*, Patrick Grüniger (3)*, Paolo Fonaciari (4)*, Hannah Krafft (1)*, Karl Link (5)*, Marco Burkhard (3)*, Samy Bouaicha (4)*, Florian M. Buck (6)*, Dominic Gascho (7)*, Michael Thali (7)*, Steffen Serowy (8)*, Oliver Ullrich (5)*, Sandra Mathews (2)*, Thomas Böni (2)*, Frank-Jakobus Rühli (2)*, Magdalena Müller-Gerbl (1)*, Elisabeth Eppler (1)*
(1) University of Basel, Department of Biomedicine
(2) University of Zurich, Institute of Evolutionary Medicine (IEM)
(3) Waid Hospital, Department of Surgery
(4) Balgrist University Hospital, Department of Orthopaedics
(5) University of Zurich, Institute of Anatomy
(6) Schulthess Clinic, Medical Radiology Institute
(7) University of Zurich, Institute of Forensic Medicine
(8) University Hospital of Magdeburg, Department of Neuroradiology

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Physiology
Cardiovascular Biology

Arginase-II promotes pre-adipocyte to release IL-6 through p38mapk leading to vascular endothelial inflammation in aging

Huang, Ji
Ji Huang (1)*, Chang Liu (1)*, Jean-Pierre Montani (1), Xiufan Ming (1), Zhihong Yang (1)*
(1) Cardiovascular and Aging Research, Department of Endocrinology, Metabolism, and Cardiovascular System, Faculty of Science and Medicine, University of Fribourg

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Physiology

Role of phosphatidylinositol transfer proteins in Ca2+ signalling at ER-phagosome contact sites

Kaba, Mayis
Mayis Kaba (1), Paula Nunes-Hasler (1), Nicolas Demaurex (1)*
(1) University of Geneva, Cell Physiology and Metabolism
Sensory coding of taste in Drosophila larva
Neagu Maier, Larisa G. Larisa Neagu-Maier (1), Felix Meyenhofer (1), Wanze Chen (2), Marjan Biocanin (2), Johannes Bues (2), Bart Deplancke (2), Simon G. Sprecher (1)*
(1) University of Fribourg, Department of Biology
(2) EPFL and Swiss Institute of Bioinformatics, Laboratory of Systems Biology and Genetics

Phosphorylation of intestinal amino acid transporter LAT4 is under food-entrained circadian control and responds to dietary protein content
Oparija, Lalita Lalita Oparija (1), Anuradha Rajendran (1), Nadège Poncet (1), François Verrey (1)*
(1) University of Zurich, Institute of Physiology and Zurich Center for Integrative Human Physiology (ZIHP)

Role of neutral amino acid transporter LAT4 in mouse epithelia
Rajendran, Anuradha Anuradha Rajendran (1), Nadège Poncet (1), Lalita Oparija (1), Brigitte Herzog (1), François Verrey (1)*
(1) University of Zurich

Quantitative interactomics in primary T cells provides a rationale for concomitant PD-1 and BTLA coinhibitor blockade in cancer immunotherapy
Blattmann, Peter Javier Celis-Gutierrez (1)*, Peter Blattmann (2)*, Yunhao Zhai (1)*, Nicolas Jarmuzynski (1), Kilian Ruminski (1), Claude Grégoire (1), Youcef Ounoughene (1), Frédéric Fiore (3), Ruedi Aebersold (2)*, Romain Roncagalli (1)*, Matthias Gstaiger (2)*, Bernard Malissen (1)*
(1) CNRS Marseille, Centre d’Immunologie
(2) ETH Zurich, Biology
(3) CNRS Marseille, Centre d’Immunophénomique

From genotype to phenotype: exploring the effect of genetic variation on protein structure and function
Cappelletti, Valentina Valentina Cappelletti (1), Christian Dörig (1), Chiara Auwerx (1), Jan Grossbach (2), Andreas Beyer (2), Paola Picotti (1)*
(1) ETH, Institute of Molecular Systems Biology
(2) University of Cologne, CECAD

Exploring the uncharacterized human proteome
Duek Roggli, Paula
Paula Duek Roggli (1)°, Alain Gateau (1)*, Amos Bairoch (2)°, Lydie Lane (2)*
(1) SIB Swiss Institute of Bioinformatics, CALIPHO group
(2) SIB Swiss Institute of Bioinformatics, CALIPHO group, Faculty of Medicine
University of Geneva, Dept of Microbiology and Molecular Medicine

99 Proteomics Stem Cells
Insights into X-chromosome inactivation using quantitative mass spectrometry
Fossati, Andrea
Andrea Fossati (1,2), Fabian Frommelt (1), Federico Uliana (1), Ruedi Aebersold (1), Matthias Gstaiger (1), Anton Wutz (2)*
(1) Institute of Molecular System Biology, D-Biol
(2) Institute of Molecular Health Science, D-Biol

100 Proteomics Cardiovascular Biology
Associating HDL proteotype with clinical HDL particle signaling capacity
Frey, Kathrin
Kathrin Frey (1), Sandra Goetze (1)*, Damaris Bausch-Fluck (1)*, Srividya Velagapudi (2)*, Lucia Rohrer (2)*, Arnold von Eckardstein (2)*, Bernd Wollscheid (1)*
(1) ETH Zürich, Institute of Molecular Systems Biology & Department of Health Sciences and Technology
(2) University and University Hospital of Zurich, Institute of Clinical Chemistry

101 Proteomics Systems Biology
Measuring protein functional states in central carbon metabolism using a structural proteomics approach
Hauser, Thomas
Thomas Hauser (1), Paola Picotti (1)*
(1) ETH Zürich, d-biol

102 Proteomics Neuroscience
Probing the structural landscape of alpha synuclein in cells and tissues
Malinovska, Liliana
Liliana Malinovska (1), Yuehan Feng (1), Estermann Alexandra (1), Paola Picotti (1)*
(1) ETH Zurich, D-BIOL, IMSB

102B Proteomics
Proteomic Profiling of >1500 Plasma Samples of the Weight Loss and Maintenance Study DiOGenes Using Single Shot DIA
Nikolovski, Nino
Roland M. Bruderer (1), Jan Muntel (1), Sebastian Müller (1), Oliver M. Bernhardt (1), Tejas Gandhi (1), Nino Nikolovski (1), Polina Mironova (2), Ondine Walter (2), Jérôme Carayol (2), Arne Astrup (3), Wim H.M. Saris (4), Jörg Hager (2), Armand Valsesia (2), Loïc Dayon (2), and Lukas Reiter (1)
(1) Biognosys, Zurich-Schlieren, Switzerland
(2) Nestlé Institute of Health Sciences, Lausanne, Switzerland
Identification of novel ADP-ribosylated proteins using an engineered Af1521 macrodomain with enhanced ADP-ribose binding capacity

Nowak, Kathrin

Kathrin Nowak (1), Florian Rosenthal (1), Deena Leslie Pedrioli (1), Kapila Gunasekera (1), Michael Hottiger (1)*
(1) UZH, DMMD

Effect of osmolytes on protein thermal stability

Pepelnjak, Monika

Monika Pepelnjak (1), Paola Picotti (2)*, Ilaria Piazza (2)*
(1) ETH Zurich, Department of Biology, IMSB
(2) ETH Zurich, Department of Biology, IMSB

Development of fully automated pipeline for phosphoproteome profiling

Stoychev, Stoyan
Stoyan Stoychev (1)*, Previn Naicker (1)*, Ireshyn Govender (1)*, Isak Gerber (1)*, Justin Jordaan (2)
(1) CSIR, Biosciences
(2) Resyn Biosciences

Dissection of YAP1 proteoforms and interactions

Uliana, Federico

Federico Uliana (1), Ciuffa Rodolfo (1), Fossati Andrea (1), Mehnert Martin (1), Frommelt Fabian (1), Aebersold Reudi (1), Gstaiger Matthias (1)
(1) Institute of Molecular System Biology, D-BIOL

Bone Marrow-Derived Cells based modulation of macrophages and cardiomyocytes for Heart regeneration

Borrego, Inês

Inês Borrego (1), Aurélien Frobert (1), Jérémy Valentin (1), Guillaume Ajalbert (1), Stéphane Cook (1), Marie-Noëlle Giraud (1)
(1) University of Fribourg, Department of Medicine

Soft substrates promote maintenance and acquisition of naive pluripotency in embryonic stem cells

Labouesse, Céline
Céline Labouesse (1), Chibeza Agley (1), Bao Xiu Tan (1), Giuliano Stirparo (1), Hannah Stuart (2), Moritz Hofer (1), Christophe Verstreken (3), William...
Cdk8 is critical for efficient PRC2 recruitment and gene repression by Xist and essential for mouse development

Andreas Postlmayr (1), Anton Wutz (1)*
(1) ETH, DBIOL

Defining the transcriptional network that governs human neural crest stem cell specification into Schwann cell precursors

Raquel R. Calçada (1), Sandra Varum (1), Elisa Marzorati (1), Lukas Sommer (1)*
(1) University of Zurich, Institute of Anatomy, Stem Cell Biology

Architecture and evolution of blade assembly in \(\beta\)-propeller lectins

François Bonnardel (1), Atul Kumar (2), Michaela Wimmerova (3), Martina Lahmann (4), Serge Perez (5), Annabelle Varro (1), Frédérique Lisacek (6), Anne Imberty (1)
(1) Univ. Grenoble Alpes, CNRS, CERMAV, Grenoble, France
(2) Univ. Grenoble Alpes, CNRS, CERMAV, Grenoble, France; CEITEC, Masaryk University, Brno, Czech Republic
(3) CEITEC, Masaryk University, Brno, Czech Republic; NCBR, Fac.Sci, Masaryk University, Brno, Czech Republic
(4) School of Chemistry, University of Bangor, Bangor, United Kingdom
(5) Univ. Grenoble Alpes, CNRS, DPM, Grenoble, France
(6) Swiss Institute of Bioinformatics, Geneva. Computer Science Department, UniGe. Section of Biology, UniGe, Switzerland

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Structural Biology, Proteomics

Quantitative structural biology of endogenous protein complexes

Marco Faini (1), Emanuela Milani (2), Charlotte Nicod (1), Alexander Leitner (1), Ludovic Gillet (1), Michael Ewing (1), Audrey Van Drogen (1), Bernd Wollscheid (2), Ruedi Aebersold (1)
(1) ETH Zurich, D-BIOL
(2) ETH Zurich, D-HEST

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Structural Biology, Proteomics

Structural analysis of protein–RNA complexes using crosslinking of segmentally isotope-labeled RNA and tandem mass spectrometry (CLIR-MS/MS)

Alexander Leitner (1), Georg Dorn (2)*, Julien Boudet (2)*, Sébastien Campagne (2)*, Christine von Schroetter (2)*, Ahmed Moursy (2)*, Chris Sarnowski (1)*, Tebbe de Vries (2)*, Ruedi Aebersold (1)*, Frédéric Allain (2)*
(1) ETH Zurich, D-BIOL, Institute of Molecular Systems Biology
(2) ETH Zurich, D-BIOL, Institute of Molecular Biology and Biophysics

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Structural Biology, Proteomics

Applying CLIR-MS to deliver structural insights into the nature of protein-RNA interactions

Christopher Sarnowski, (1), Tebbe de Vries (2)*, Anna Knörlein (3)*, Michael Götze (1)*, Frederic Ht Allain (2)*, Jonathan Hall (3)*, Alexander Leitner (1)*
(1) ETH Zurich, Department of Biology, Institute of Molecular Systems Biology
(2) ETH Zurich, Department of Biology, Institute of Molecular Biology and Biophysics
(3) ETH Zurich, Department of Chemistry and Applied Biosciences, Institute of Pharmaceutical Sciences

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Structural Biology, Biophysics

The CXCL12/HMGB1 heterocomplex from biophysical studies to drug design

Jacopo Sgrignani (1), Enrico Fassi (1), Gianluca D’Agostino (1), Valentina Cecchinato (1), Maura Garofalo (1), Giovanni Grazioso (2), Mariagrazia Uguccioni (1), Andrea Cavalli (1)*
(1) Institute for Research in Biomedicine (IRB), Università della Svizzera italiana (USI), Bellinzona, Switzerland
(2) bDipartimento di Scienze Farmaceutiche, Università degli Studi di Milano, Milan, Italy

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Structural Biology, Proteomics

Feasibility of succinimidyl-based cross-linking at slightly acidic conditions

Esben Trabjerg (1), Alexander Leitner (1)*
(1) ETH Zurich, Institute of Molecular Systems Biology, Department of Biology
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Systems Biology
Modeling CLIMP-63 spatio-temporal distribution and its interplay with Post-translational modification

Denhardt-Eriksson, Robin
Robin Denhardt-Eriksson (1), Patrick Sandoz (2), Laurence Abrami (2), Sylvia Ho (2), Béatriz Kunz (2), Françoise Gisou Van der Goot (2), Vassily Hatzimanikatis (1)
(1) Laboratory of Computational Systems Biotechnology, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
(2) Global Health Institute, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland

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Systems Biology, Comp. Biology
Cross-Linking/Mass Spectrometry for Proteome-Wide Interactome studies: Protein Interaction Landscape in Drosophila Embryos

Götze, Michael
Michael Götze (1)*, Claudio Iacobucci (2)*, Christian Ihling (2), Elmar Wahle (3), Andrea Sinz (2)*
(1) ETH Zürich, IMSB
(2) University of Halle, Institute of Pharmacy
(3) University of Halle, Institute of Biochemistry

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Systems Biology, Proteomics
Comparison of proximity-labeling biotin ligases to discover the proteome composition of chromatin loci in mouse embryonic stem cells

Pfändler, Ramon
Ramon Pfändler (1), Rodrigo Villaseñor (1), Joel Wirz (1), Bernd Roschitzki (2), Tuncay Baubec (1)*
(1) University of Zurich, Department of Molecular Mechanisms of Disease
(2) Functional Genomics Center Zurich

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Systems Biology
Systematic identification of drug targets with structural profiling of the proteome

Piazza, Ilaria
Ilaria Piazza (1), Nigel Beaton (2)*, Roland Bruderer (2)*, Lukas Reiter (2)*, Paola Picotti (1)*
(1) Institute for Molecular Systems Biology, ETH Zurich, Zurich, Switzerland.
(2) Biognosys AG, Schlieren, Switzerland

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Systems Biology. Comp. Biology
Multivariate Control of Transcript to Protein Variability in Single Mammalian Cells

Popovic, Doris
Doris Popovic (1)*, Jan Ellenberg (2)*, Lucas Pelkmans (1)*
(1) University of Zurich, Department of Molecular Life Sciences
(2) EMBL Heidelberg

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Systems Biology
Microbiology, Infectious Diseases
Lung-on-a-chip microtechnologies for studies of host-pathogen interactions in Tuberculosis

Thacker, Vivek
Vivek V Thacker (1), Riccardo Barrile (2), Katia Karalis (2), and John D McKinney (1)
(1) Global Health Institute, EPFL, Lausanne, Switzerland
(2) Emulate Inc, Boston, USA

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Systems Biology, Proteomics

Proximity biotinylation labeling with engineered chromatin readers reveals the proteome composition of key chromatin states in mouse embryonic stem cells

Villaseñor, Rodrigo
Rodrigo Villasenor (1), Ramon Pfaendler (1), Christian Feller (2), Joel Wirz (1), Ruedi Aebersold (2), Tuncay Baubec (1)*
(1) University of Zurich, Department of Molecular Mechanisms of Disease
(2) ETH Zurich

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Systems Biology, Microbiology

Single promoter transcription dynamics reveal bursting kinetic chromatin regulation of osmostress genes expression

Wosika, Victoria
Victoria Wosika (1), Serge Pelet (1)*
(1) University of Lausanne, Department of Fundamental Microbiology (DMF)

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Virology, Microbiology

The Role of Ceramide at Late Stages of Adenovirus Infection

Olszewski, Dominik
Dominik M. Olszewski (1), Itzel Shantal Martínez López (1), Maarit Suomalainen (1), Lukas B. Tanner (2), Markus R. Wenk (2), Urs F. Greber (1)*
(1) Department of Molecular Life Sciences, University of Zurich
(2) Department of Biochemistry, National University of Singapore

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Virology, Molecular & Cellular Biosciences

Towards the biological mechanisms underlying Adenovirus-induced cell lysis

Petkidis, Anthony
Anthony Petkidis (1), Vardan Andriasyan (1), Urs F Greber (1)*
(1) UZH, Department of Molecular Life Sciences, Greber Lab

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Virology, Infectious Diseases

Human Rhinovirus infection, how and why to study it?

Volle, Romain
Romain Volle (1), Robert Witte (1), Luca Murer (1), Daria Seiler (1), Urs F Greber (1)*
(1) UZH, Department of Molecular Life Sciences, Greber Lab

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Graduate School University of Bern
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SV Postdoc Association, EPFL
Glousker, Galina

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Upcoming Events

LS² Life Sciences Switzerland
50 years: USGEB & LS² 1969-2019

New Trends in Proteomics
Annual Swiss Proteomics Meeting

PLENARY SPEAKERS
Alexey Nevizhalski
"Applications of Ultrafast Database Searching in Proteomics"

Mikhail Savitski
"Protein Stability in Drug Discovery and Molecular Biology"

FLASH PRESENTATIONS

ORAL PRESENTATIONS

BEST PRESENTATION AWARDS

More information at
meetings.ls2.ch/proteomics-2019

Please register before 15 March 2019!

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2nd meeting as LS² intersection Cardiovascular Biology

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Swiss Integrative Center for Human Health SA
Passage du Cardinal 138, CH-1700 Fribourg

KEYNOTE SPEAKERS

Peter Kohl (University Hospital Freiburg)
Anne MacKay (University of Bern)
Cathy Shanahan (Kings College London)
Christophe Schellermon (CMI Geneva)
Lucas Lauter (EPFL, Lausanne)

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Abstract deadline: 11.02.2019
General deadline: 01.03.2019

www.meetings.ls2.ch/cardiovascular2019

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