



# SWISS SOCIETY FOR MICROBIOLOGY



## **Annual congress 2018**

CHUV – Lausanne

**August 28-30, 2018**

**Tuesday, August 28, 2018**

SSM\_SCNAT Sponsored Satellite Symposia

sc|nat<sup>+</sup>

Swiss Academy of Sciences  
Akademie der Naturwissenschaften  
Accademia di scienze naturali  
Académie des sciences naturelles

**2018 SSM annual meeting will take place in Lausanne from Tuesday 28th till Thursday 30th of August.**

Attend lectures by experts in:

- clinical microbiology
- clinical bioinformatics
- antibiotic resistance
- cell microbiology
- prokaryotic biology
- environmental microbiology
- virology
- mycology
- parasites
- evolution
- lay communication



**program**

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- B. pertussis\*

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### Congress organization

**Prof. Gilbert Greub, Institut de Microbiologie, Lausanne**

President SSM-SGM 2016-2018

**Prof. Stefan Kunz, Institut de Microbiologie, Lausanne**

Co-president of the Scientific Committee

**Sébastien Aeby, Institut de Microbiologie, Lausanne**

Organizing committee

### Scientific committee

**Prokaryotic Biology**

Mélanie Blokesch + Patrick Viollier

**Environmental Microbiology**

Pilar Junier + Jan Van der Meer

**Mycology**

Alix Coste + Sophie Martin

**Virology**

Stefan Kunz + Volker Thiel

**Clinical Microbiology**

Jacques Schrenzel + Gilbert Greub

**Lay communication**

Karl Perron + Gilbert Greub

Dear Colleagues,

The Swiss Society for Microbiology will organize its annual meeting in Lausanne from 28th to 30th August 2018. During 3 days, you will enjoy interesting invited lectures given by experts in the field on a variety of topics related to microbiology, including clinical microbiology, clinical bioinformatics, antibiotic resistance, cell microbiology, prokaryotic biology, environmental microbiology, virology, mycology, parasites, evolution and lay communication.

In addition, specific LS2 NRP72 and 3R sessions have been organized... Thus, whatever your field and your background, for sure you will find the science you are looking for in Lausanne during these 3 days.

Moreover, you will have the opportunity to visit the olympic museum before the gala dinner that will take place there with a beautiful lake view.

I hope to see all of you at the 2018 SSM Opening session.



Prof. Gilbert Greub

President of the Swiss Society for Microbiology

**Venue**

University Hospital of Lausanne, CHUV – Auditoires  
Rue du Bugnon 46, CH-1011 Lausanne

**Registration**

online on [www.meeting-com.ch](http://www.meeting-com.ch) / Conferences & Meetings / 2018  
or to the Congress Office Management as below

**Congress office management**

Meeting.com Sàrl Congress Organisation  
Rue des Pâquis 1 • PO box 100  
CH-1033 Cheseaux-sur-Lausanne  
T +41 (0)21 312 92 61 • F +41 (0)21 312 92 63  
[info@meeting-com.ch](mailto:info@meeting-com.ch)

**Submissions of abstracts**

online on [www.ssm2018.exordo.com](http://www.ssm2018.exordo.com)  
handled by the Congress Office Management. All information or requirements  
on the above-mentioned address

**Contest “Engage your Audience!”**

The contest “Engage your Audience!” allows young researchers to present  
their research in front of their peers, using a simple and plain register. To do  
so, they will have only three minutes available! In order to participate to the  
contest applicants should be pursuing their research as PhD student

**Credits in demand to the SSM**

Tuesday 28.08.18	6 credits
Wednesday 29.08.18	7 credits
Tuesday 30.08.18	6 credits

Tuesday, August 28, 2018

**From 08.00 Registration at the welcome desk in the Foyer**

<b>10.00-11.30</b>	CM 1 – Metagenomics	CÉSAR ROUX
	EM 1 – Water safety and wastewater	ALEXANDRE YERSIN
	PB 1 – Cell microbiology	AUGUSTE TISSOT
	MY 1 – Clinical mycology	CHARLOTTE OLIVIER
	VI 1 – Virus-host interaction	MATHIAS MAYOR
<b>11.45-12.45</b>	Exclusive Symposium – BD	CÉSAR ROUX
<b>13.00-14.30</b>	CM 2 – Mass spectrometry and other innovative diagnostic microbiology approaches	CÉSAR ROUX
	EM 2 – Metagenomics	ALEXANDRE YERSIN
	PB 2 – Cell division	AUGUSTE TISSOT
	MY 2 – Environmental mycology	CHARLOTTE OLIVIER
	VI 2 – Emerging viruses	MATHIAS MAYOR
<b>14.30-15.00</b>	<b>Coffee break in the exhibition</b>	
<b>15.00-16.30</b>	CM 3 – Molecular diagnosis & genomics	CÉSAR ROUX
	EM 3 – Ecology & evolution	ALEXANDRE YERSIN
	PB 3 – Bacterial pathogenesis	AUGUSTE TISSOT
	MY 3 – Basic mycology	CHARLOTTE OLIVIER
	VI 3 – Viral tropism and virulence	MATHIAS MAYOR
<b>17.00-18.00</b>	SSM General Assembly	CÉSAR ROUX
<b>18.00-19.00</b>	Contest “Engage your Audience!”	CÉSAR ROUX
<b>19.00-19.30</b>	<b>Aperitif on the 20th floor</b>	

Wednesday, August 29, 2018

<b>From 08.00</b>	<b>Registration at the welcome desk in the Foyer</b>	
<b>09.00-09.30</b>	Keynote 1 – Julia Vorholt, Zurich	<b>CÉSAR ROUX</b>
<b>09.30-10.00</b>	Keynote 2 – Abigail Bouwman, Zürich	<b>CÉSAR ROUX</b>
<b>10.00-10.30</b>	<b>Coffee break in the exhibition – Posters SSM</b>	
<b>10.30-12.00</b>	Session 1 – Modern diagnostic microbiology	<b>CÉSAR ROUX</b>
	Session 2 – Microbial pathogenesis	<b>ALEXANDRE YERSIN</b>
	Session 3 – Antibiotic Resistance	<b>AUGUSTE TISSOT</b>
	Session 4 – Phages	<b>CHARLOTTE OLIVIER</b>
	Session 5 – Vector-borne diseases	<b>MATHIAS MAYOR</b>
<b>12.00-14.00</b>	<b>Lunch break in the exhibition – Posters SSM</b>	
<b>12.45-13.45</b>	Exclusive Symposium – Maldi-ToF	<b>CÉSAR ROUX</b>
<b>14.00-15.30</b>	Session 6 – Combating Antibiotic Resistance [NRP72]	<b>CÉSAR ROUX</b>
	Session 7 – Microfluidics and innovative diagnostic tests	<b>ALEXANDRE YERSIN</b>
	Session 8 – Innate immunity	<b>AUGUSTE TISSOT</b>
	Session 9 – Host pathogen interaction & Invasion	<b>CHARLOTTE OLIVIER</b>
	Session 10 – Intracellular bacteria	<b>MATHIAS MAYOR</b>
<b>15.30-16.00</b>	<b>Coffee break in the exhibition – Posters SSM</b>	
<b>16.00-17.30</b>	Session 11 – Combating Antibiotic Resistance [NRP72]	<b>CÉSAR ROUX</b>
	Session 12 – Lay communication	<b>ALEXANDRE YERSIN</b>
	Session 13 – Bacterial toxins & Cell microbiology	<b>AUGUSTE TISSOT</b>
	Session 14 – Microbial evolution	<b>CHARLOTTE OLIVIER</b>
	Session 15 – Viral hepatitis	<b>MATHIAS MAYOR</b>
<b>18.00-night</b>	<b>Olympic Museum: visit - aperitif - dinner</b>	

Thursday, August 30, 2018

<b>From 08.00</b>	<b>Registration at the welcome desk in the Foyer</b>	
<b>09.00-09.30</b>	Keynote 3 – Thomas Clavel, Aachen	<b>CÉSAR ROUX</b>
<b>09.30-10.00</b>	Keynote 4 – Pilar Junier, Neuchâtel	<b>CÉSAR ROUX</b>
<b>10.00-10.30</b>	<b>Coffee break in the exhibition – Posters SSM</b>	
<b>10.30-12.00</b>	Session 16 – Metagenomics	<b>CÉSAR ROUX</b>
	Session 17 – Cell surface structures in prokaryotes	<b>ALEXANDRE YERSIN</b>
	Session 18 – Zoonotic pathogen	<b>AUGUSTE TISSOT</b>
	Session 19 – Microbial pathology & immunity	<b>CHARLOTTE OLIVIER</b>
	Session 20 – Mycobacteria	<b>MATHIAS MAYOR</b>
<b>12.00-14.00</b>	<b>Lunch break in the exhibition – Posters SSM</b>	
<b>12.45-13.45</b>	Exclusive Symposium – Automatization	<b>CÉSAR ROUX</b>
<b>14.00-15.30</b>	Session 21 – Diagnostic microbiology	<b>CÉSAR ROUX</b>
	Session 22 – Environmental microbiology	<b>ALEXANDRE YERSIN</b>
	Session 23 – Microbial pathology & Cell microbiology	<b>AUGUSTE TISSOT</b>
	Session 24 – Bacterial genomics	<b>CHARLOTTE OLIVIER</b>
	Session 25 – Innovative non mammalian models (3R session)	<b>MATHIAS MAYOR</b>
<b>15.30-16.00</b>	<b>Coffee break in the exhibition – Posters SSM</b>	
<b>16.00-16.30</b>	SSM Poster Awards and "SSM career encouragement award"	<b>CÉSAR ROUX</b>
<b>16.30-17.00</b>	Keynote 5 – Nicolas Fasel, Lausanne	<b>CÉSAR ROUX</b>
<b>17.00</b>	<b>End of Meeting</b>	



## SSM\_SCNAT Sponsored Satellite Symposia

10.00-11.30

CM1	<b>Metagenomics</b> Co-chairs: Helena Seth-Smith, Basel; Gilbert Greub, Lausanne <b>CÉSAR ROUX</b>
10.00-10.30	<b>Clinical metagenomics: what's new?</b> Jacques Schrenzel, Geneva (CH)
<b>Submitted talks</b>	
CM-01*	<b>MUCOVIB project: Intracellular bacteria and fastidious organisms among children with Cystic Fibrosis, an unknown association</b> – Laure Pittet, Geneva (CH)
CM-02	<b>Nasopharyngeal and middle-ear microbiota in children with acute otitis media</b> – Silvio Brugger, Zurich (CH)
CM-03*	<b>16S rRNA metagenomics to investigate the death of immersed bodies: a preliminary study</b> – Valentin Scherz, Lausanne (CH)
CM-04	<b>Comparison of wgMLST (BioNumerics) vs mapping and core-genome SNPs approach for the epidemiological investigations of vancomycin-resistant Enterococcus faecium</b> – Dominique Blanc, Lausanne (CH)

EM1	<b>Water safety and wastewater</b> Co-chairs: Pilar Junier, Neuchâtel; Christoph Holliger, Lausanne <b>ALEXANDRE YERSIN</b>
10.00-10.30	<b>Viral inactivation and resistance</b> Tamar Kohn, Lausanne (CH)
<b>Submitted talks</b>	
EM-01*	<b>Microbial degradation of antibiotics: the necessity for micromolar concentration Studies</b> – Birge Ozel Duygan, Lausanne (CH)
EM-02	<b>Evolution of microbial communities in aerobic granular sludge sequencing batch reactor during changes of wastewater composition</b> – Aline Adler, Lausanne (CH)
EM-03	<b>Understanding the occurrence of antimicrobial resistance in water treatment systems and strategies for its reduction</b> – Claire Bertelli, Lausanne (CH)
EM-04	<b>Quantitative tracking of carbapenem-resistant bacteria and extended spectrum beta-lactamase producing bacteria from treated wastewater to Swiss river ecosystems</b> – Feng Ju, Dübendorf (CH)

10.00-11.30

PB 1	<b>Cell microbiology</b> Co-chairs: Mélanie Blokesch, Lausanne; Patrick Viollier, Geneva <b>AUGUSTE TISSOT</b>
10.00-10.30	<b>Unexpected complexity of the cell cycle in Corynebacteria</b> Marc Bramkamp, Munich (DE)
<b>Submitted talks</b>	
PB-01*	<b>Explore RdhK based regulatory network of organohalide respiration using a hybrid proteins strategy</b> – Mathilde Willemin, Lausanne (CH)
PB-02	<b>Was chlamydial adaptation to hypoxia an early determinant of plastid endosymbiosis?</b> – Steven Ball, Lille (FR)
PB-03	<b>QstR-dependent regulation of competence and type VI secretion in Vibrio cholerae</b> – Milena Jaskólska, Lausanne (CH)
PB-04	<b>Molecular mechanisms of host-pathogen interaction between Vibrio cholerae and amoeba</b> – Audrey Sophie Vanhove, Lausanne (CH)

MY 1	<b>Clinical mycology</b> Co-chairs: Salomé Leibundgut, Zurich; Frédéric Lamothe, Lausanne <b>CHARLOTTE OLIVIER</b>
10.00-10.30	<b>Inborn errors of IL-17-mediated immunity and chronic mucocutaneous Candidiasis</b> Anne Puel, Paris (FR)
<b>Submitted talks</b>	
MY-01	<b>Comparative genomics for understanding the development of multidrug resistance in Candida lusitanae</b> – Dominique Sanglard, Lausanne (CH)
MY-02	<b>Functional and expression analyses of the Pneumocystis MAT genes suggest obligate sexuality through primary homothallism within host lungs</b> – Philippe Hauser, Lausanne (CH)
MY-03*	<b>Rapid induction of reversible azole resistance in Aspergillus fumigatus</b> – Marion Aruanno, Lausanne (CH)
MY-04	<b>Detection of Candida auris by MALDI-TOF MS</b> – Alix Coste, Lausanne (CH)

\* Student Paper

## 10.00-11.30

VI 1	<b>Virus-host interaction</b> Co-chairs: Caroline Tapparel-Vu, Geneva; Stefan Kunz, Lausanne <b>MATHIAS MAYOR</b>
<b>10.00-10.30</b>	<b>Immunity and Pathogenesis in Viral Infection</b> Daniel Pinschewer, Basel (CH)
<b>Submitted talks</b>	
VI-01*	<b>Characterization of the epitranscriptomic landscape of HIV-infected cells</b> – Sara Cristinelli, Lausanne (CH)
VI-02*	<b>Hantavirus entry into human respiratory epithelial cells involves macropinocytosis</b> – Giulia Torriani, Lausanne (CH)
(VI-03*	<b>Epidemiological analysis of enterovirus cases in Bern since 1998</b> – Carole Grädel, Bern (CH)

## 11.45-12.45



**BD** is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company supports the heroes on the frontlines of health care by developing innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its 65000 employees have a passion and commitment to help improve patient outcomes, improve the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to better diagnose disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. In 2017, BD welcomed C. R. Bard and its products into the BD family. For more information on BD, please visit [bd.com](http://bd.com).

**Exclusive Symposium on automation**  
Co-chairs: Franziska Suter, Bern; Gilbert Greub, Lausanne  
**CÉSAR ROUX**

**Lab Automation: Project and change management**  
Antony Croxatto, PhD, FAMH specialist in medical microbiology, CHUV, Lausanne (CH)

**New trends in laboratory automation**  
John T. Page, Sr Director, Lab Automation & Software Engineering BD US

## 13.00-14.30

CM2	<b>Mass spectrometry and other innovative diagnostic microbiology approaches</b> Co-chairs: Katia Jaton, Lausanne; Peter Keller, Zürich <b>CÉSAR ROUX</b>
<b>13.00-13.30</b>	<b>Computational metabolite identification approaches: application to the study of microorganisms' metabolomes</b> Pierre-Marie Allard, Geneva (CH)
<b>Submitted talks</b>	
CM-05	<b>Comparison of the BD Phoenix™ CPO Detect Test vs. routine testing for detection of Carbapenemase Producers</b> – Antony Croxatto, Lausanne (CH)
CM-06	<b>Proteomics of antimicrobial tolerance modeling, predicting and understanding</b> – Pablo Manfredi, Basel (CH)
CM-07	<b>Identification and characterization of the LysR-type transcription regulator FosR and its role in fosfomycin resistance in Klebsiella pneumoniae</b> – Linda Müller, Fribourg (CH)
CM-08	<b>High mortality of non-Fournier necrotising fasciitis with Enterobacteriales: time to rethink classification?</b> – Adrian Egli, Basel (CH)

EM2	<b>Metagenomics</b> Co-chairs: Claire Bertelli, Lausanne; Vladimir Lazarevic, Geneva <b>ALEXANDRE YERSIN</b>
<b>13.00-13.30</b>	<b>A diversity of deep terrestrial subsurface metabolic processes revealed by metaproteogenomics</b> Rizlan Bernier-Latmani, Lausanne (CH)
EM-05	
<b>Submitted talks</b>	
EM-06	<b>The small RNA RyhB is a regulator of cytochrome expression in Shewanella Oneidensis</b> – Karin Lederballe Meibom, Lausanne (CH)
EM-07*	<b>Arsenic methylation across microbial phyla</b> – Karen Viacava, Lausanne (CH)
EM-08	<b>Honeybees from the same colony harbour individualized gut bacterial communities</b> – Kirsten Ellegaard, Lausanne (CH)

\* Student Paper

## 13.00-14.30

PB 2	<b>Cell division</b> Co-chairs : Justine Collier, Lausanne ; Patrick Viollier, Geneva <b>AUGUSTE TISSOT</b>
<b>13.00-13.30</b>	<b>Chromosome architecture in prokaryotes</b> Stephan Gruber, Lausanne (CH)
<b>Submitted talks</b>	
PB-05*	<b>Investigation of the potential role of ParB in chromosome and plasmid segregation among Chlamydiales order</b> – Aurélie Scherler, Lausanne (CH)
PB-06*	<b>Harnessing CRISPR system for genome editing in human pathogen <i>S. pneumoniae</i></b> – Dimitra Synefiaridou, Lausanne (CH)
PB-07	<b>Multilayered control of the initiation of DNA replication in <i>Caulobacter crescentus</i></b> – Antonio Frandi, Lausanne (CH)
PB-08	<b>Meiotic cell cycle and re-fertilization blocks are coordinately regulated in fission Yeast</b> – Aleksandar Vjestica, Lausanne (CH)

MY 2	<b>Environmental mycology</b> Co-chairs : Saskia Bindschedler, Neuchatel ; Philippe Hauser, Lausanne <b>CHARLOTTE OLIVIER</b>
<b>13.00-13.30</b>	<b>Fungi and secretomes: sources of chemical biodiversity</b> Katia Gindro – Sylvain Schnee, Nyon (CH)
<b>Submitted talks</b>	
MY-05	<b>Assessment the potentiality of some soil fungi in Battery Myco-remediation</b> – Metwally Kottb, Suez Canal University, Germany (DE)
MY-06*	<b>Implications of typhoon on community assemblages of myxomycetes: A case study on beach and inland forests of aurora and quezon province, Philippines</b> – Enrico Cabutaje, Manila (PH)
MY-07*	<b>New insights in bacteria-fungi interactions in nutritional interference: the case of oxalotrophy as a biocontrol strategy against phytopathogenic fungi</b> – Aislinn Estoppey, Neuchâtel (CH)
MY-08*	<b>A chromosome-scale assembly of the wheat powdery mildew genome provides insight into origin and evolution of genes associated with host-pathogen interactions</b> – Marion Müller, Zurich (CH)

## 13.00-14.30

VI 2	<b>Emerging viruses</b> Co-chairs : Rahel Ackermann-Gäumann, Bern ; Stefan Kunz, Lausanne <b>MATHIAS MAYOR</b>
<b>13.00-13.30</b>	<b>Pathogenesis of highly pathogenic hemorrhagic fever viruses: Example of Lassa and Ebola viruses</b> Sylvain Baize, Lyon (FR)
<b>Submitted talks</b>	
VI-04	<b>Receptor tyrosine kinases are promising targets in Lassa virus antiviral therapy</b> – Chiara Fedeli, Lausanne (CH)
VI-05	<b>Identification of small-molecule viral inhibitors targeting various stages of the life-cycle of hantaviruses</b> – Sylvia Rothenberger, Lausanne (CH)
VI-06	<b>Combination of second and third generation sequencing technologies for genome sequencing of RNA viruses in clinical samples</b> – Alban Ramette, Bern (CH)

## 14.30-15.00 Coffee break

## 15.00-16.30

CM3	<b>Molecular diagnosis &amp; genomics</b> Co-chairs : Abdessalam Cherkaoui, Geneva <b>CÉSAR ROUX</b>
<b>15.00-15.30</b>	<b>Human Papillomavirus: molecular diagnostics and clinical applications</b> Adriaan Van Brule, Den Bosch (NL)
<b>Submitted talks</b>	
CM-09	<b>Up-to-date detection of <i>Helicobacter pylori</i> in gastric biopsies including resistance testing for macrolides and fluoroquinolones</b> – Konrad Egli, Liebefeld (CH)
CM-10	<b>The MUCOVIB project: Concordance between upper and lower airway microbiota in children with Cystic Fibrosis</b> – Claire Bertelli, Lausanne (CH)
CM-11	<b>First complete genome sequence of <i>Actinobacillus porcitonisillae</i> using the Oxford Nanopore sequencing technology</b> – Valentina Dona, Bern (CH)



15.00-16.30

EM3	<b>Ecology &amp; evolution</b> Co-chairs: Sara Mitri, Lausanne; Christof Holliger, Lausanne	ALEXANDRE YERSIN
15.00-15.30	<b>Mechanisms of adaptive evolution in fungal pathogens</b> Daniel Croll, Neuchâtel (CH)	
<b>Submitted talks</b>		
EM-09*	Understanding the activation of integrative and conjugative element transfer to the recipient cell by investigating the expression of the element's core genes inside the donor cell – Andrea Vucicevic, Lausanne (CH)	
15.30-15.45		
EM-10*	Transfer of an integrative and conjugative element in <i>Pseudomonas</i> may be triggered by oxidative stress – Roxane Moritz, Lausanne (CH)	
15.45-16.00		
EM-11*	Origin of sediment bacteria: water versus soil – Mathilda Hayoz, Neuchâtel (CH)	
16.00-16.15		
EM-12*	Phylogenetics of bacteria and their plasmids: comparing bioinformatic approaches – Jana S. Huisman, Zurich (CH)	
16.15-16.30		

PB 3	<b>Bacterial pathogenesis</b> Co-chairs: Mélanie Blokesch, Lausanne; Marc Bramkamp, München	AUGUSTE TISSOT
15.00-15.30	<b>A RNA helicase mutant shows disturbed magnesium homeostasis</b> Patrick Linder, Geneva (CH)	
<b>Submitted talks</b>		
PB-09	Development of a novel vaccine for contagious caprine pleuropneumonia based on a fast-growing <i>Mycoplasma feriruminatoris</i> chassis – Fabien Labroussaa, Bern (CH)	
15.30-15.45		
PB-10*	Tn-sequencing of <i>Mycoplasma hyopneumoniae</i> and <i>Mycoplasma hyorhinis</i> mutant libraries reveals potential virulence-associated, non-essential genes – Simona Gerber, Bern (CH)	
15.45-16.00		
PB-11*	An interbacterial killing device influences bacterial evolution in <i>Vibrio cholerae</i> – Noémie Matthey, Lausanne (CH)	
16.00-16.15		
PB-12	A new lethality-based assay to screen anti-virulence compounds against <i>Staphylococcus aureus</i> – Sara Leoni, Genève (CH)* Student Paper	
16.15-16.30		

15.00-16.30

MY 3	<b>Basic mycology</b> Co-chairs: Alix Coste, Lausanne; Philippe Hauser, Lausanne	CHARLOTTE OLIVIER
15.00-15.30	<b>Chemical defense of fungi against bacteria and nematodes</b> Markus Künzler, Zurich (CH)	
<b>Submitted talks</b>		
MY-09*	Investigation of the parameters of Pom1 gradient formation – Veneta Gervanova, Lausanne (CH)	
15.30-15.45		
MY-10	Comparative study of genetically similar but phenotypically distinct <i>Candida albicans</i> isolates – Kontxi Martinez de San Vicente, Zurich (CH)	
15.45-16.00		
MY-11*	What is a fungal barcode? – Florian Gschwend, Zurich (CH)	
16.00-16.15		
MY-12	Two small GTPases orchestrate cell polarity in fission yeast – Laura Merlini, Lausanne (CH)	
16.15-16.30		

VI 3	<b>Viral tropism and virulence</b> Co-chairs: Silke Stertz, Zurich; Mirco Schmolke, Geneva	MATHIAS MAYOR
15.00-15.30	<b>Heparan sulfate binding is a critical determinant of enterovirus 71 dissemination and pathogenesis in humans</b> Caroline Tapparel-Vu, Geneva (CH)	
15.30-16.00	<b>Influenza A virus PB1-F2 is a multifunctional pathogenicity factor acting in a cell type dependent fashion</b> Mirco Schmolke, Geneva (CH)	
<b>Submitted talks</b>		
VI-07	Rapid and accurate diagnosis of Influenza A/B and respiratory syncytial virus in adults using FilmArray, Liaison MDX and GenExpert systems – Stanislava Steiner, Lucerne (CH)	
16.00-16.15		
VI-08*	The prevalence and epidemiology of human adenovirus infections in Bern; 1998-Jan 2018 - Joyce – Odeke Akello, Spiez (CH)	
16.15-16.30		

CM	Clinical Microbiology
EM	Environmental Microbiology
PB	Prokaryotic Biology
MY	Mycology
VI	Virology

## SSM Opening Sessions

**17.00-18.00 General Assembly**

CÉSAR ROUX

**18.00-19.00 Contest “Engage your Audience!”**

CÉSAR ROUX

The contest “Engage your Audience!” allows young researchers to present their research in front of their peers, using a simple and plain register. To do so, they will have only three minutes available! In order to participate to the contest applicants should be pursuing their research as PhD student

**19.00-19.30 Aperitif on the 20th floor**

Chair: Pilar Junier, Neuchâtel & David Johnson, EAWAG

**09.00-09.30**

Keynote 1

**The leaf microbiota: disassembling and rebuilding to explore plant microbe interactions**

CÉSAR ROUX

Julia Vorholt, Zurich (CH)

**09.30-10.00**

Keynote 2

**Tuberculosis: combining research from ancient DNA and historical epidemiology**

CÉSAR ROUX

Abigail Bouwman, Zurich (CH)

**10.00-10.30 Coffee break**

**10.30-12.00**

Session 1

**Modern diagnostic microbiology**

CÉSAR ROUX

Co-chairs: Katia Jaton, Lausanne; Jacques Schrenzel, Geneva

**10.30-11.00**

**Image analysis in modern clinical microbiology**

Raphaël Marcelpoil, Grenoble (FR)

**Submitted talks**

S-01

**11.00-11.15**

Optimization of carbapenemase detection in pathogenic bacteria using Matrix-Assisted Laser-Desorption/Ionization Time of Flight (MALDI-TOF) – Alix Coste, Lausanne (CH)

S-02\*

**11.15-11.30**

Evaluation of different Nuclear Magnetic Resonance (NMR) methods for metabolomic studies in *Streptococcus pneumoniae* – Lukas Troxler, Bern (CH)

S-03\*

**11.30-11.45**

The intestinal microbiota predisposes to the occurrence of traveller's diarrhoea and to the carriage of multidrug-resistant *Enterobacteriaceae* after travelling to tropical regions – Stefano Leo, Geneva (CH)

S-04\*

**11.45-12.00**

Setting up of a functional metagenomics methodology to reveal the resistome in pig farms – Julia Moor, Bern (CH)

\* Student Paper

10.30-12.00

Session 2 **Microbial pathogenesis** **ALEXANDRE YERSIN**  
Co-chairs : Silvia Ardissonne, Lausanne ; Stephan Gruber, Lausanne

**10.30-11.00 Pathogenesis of Bartonella infections**  
Christoph Dehio, Basel (CH)

#### Submitted talks

- S-05 **11.00-11.15** Full attenuation of a highly pathogenic *Mycoplasma mycoides* subsp. *capri* via synthetic genomics-based deletions – Jörg Jores, Bern (CH)
- S-06 **11.15-11.30** Identification and characterization of factors involved in cell wall homeostasis in *Pseudomonas aeruginosa* – Coralie Fumeaux, Harvard (USA)
- S-07 **11.30-11.45** Short chain fatty acids control SPI-I phase variation post-transcriptionally – Alyson Hockenberry, Zurich (CH)
- S-08\* **11.45-12.00** Comparative genome analysis of *Neisseria mucosa* subspecies reveals a putative role for *kataA*, *sodC*, *pilE* and *fimT* homologs in the pathogenesis of *N. mucosa* subsp. *macacae* endocarditis – Florian Tagini, Lausanne (CH)

Session 3 **Antibiotic Resistance** **AUGUSTE TISSOT**  
Co-chairs : Annelies Zinkernagel, Zurich ; Antony Croxatto, Lausanne

**10.30-11.00 Multidrug resistance and carbapenemase producers in Gram negative bacteria**  
Patrice Nordmann, Fribourg & Lausanne (CH)

#### Submitted talks

- S-09\* **11.00-11.15** Characterization of multidrug resistance plasmids harbored in enterovirulent *Escherichia coli* isolated from diarrheic pigs in Switzerland – Michael Brilhante, Bern (CH)
- S-10 **11.15-11.30** Antimicrobial resistant bacteria in food at Swiss retail level: assessment of prevalence and consumer exposure – Christoph Jans, Zurich (CH)
- S-11 **11.30-11.45** Functional characterization of co-adjuvants that prevent the spread of antibiotic resistance development in *Streptococcus pneumoniae* – Arnau Domenech, Lausanne (CH)
- S-12\* **11.45-12.00** Epigenetically inherited antibiotic resistance: another component of a multi-faceted problem – Paddy Gibson, Lausanne (CH)

10.30-12.00

Session 4 **Phages** **CHARLOTTE OLIVIER**  
Co-chairs : Sylvia Rothenberger, Lausanne ; Grégory Resch, Lausanne

**10.30-11.00 Dispensable but effective, the function of the central spike tip protein of the Myoviridae contractile tail**  
Yves Mattenberger, Geneva (CH)

#### Submitted talks

- S-13\* **11.00-11.15** Mutations in the *bcs* operon of *Erwinia amylovora* abolish infection by bacteriophages S6 and M7 – Leandra Knecht, Zurich (CH)
- S-14\* **11.15-11.30** Transfer of pathogenic viruses and bacteriophages from liquid to skin – Ana Karina Pitol Garcia, Dübendorf (CH)
- S-15 **11.30-11.45** Optimization protocol for the extraction of bacteriophages from soil samples preceding metagenomics analysis – Pauline Göller, Zurich (CH)
- S-16 **11.45-12.00** Efficacy of phage therapy against lethal methicillin resistant *Staphylococcus aureus* (MRSA) ventilator associated pneumonia - an experimental study in rats – Joseph Prazak, Bern (CH)

Session 5 **Vector-borne diseases** **MATHIAS MAYOR**  
Co-chairs : Marie-Lise Tritten, La Chaux-de-Fonds ; Matthias Schweizer, Bern

**10.30-11.00 Insect-borne pathogens emerging in Europe**  
Eva Veronesi, Zurich (CH)

#### Submitted talks

- S-17\* **11.00-11.15** Current and future spatial distribution of the tick *Ixodes ricinus* - host of the *Rhadinobacterium* bacterial pathogens - in Switzerland – Estelle Rochat, Lausanne (CH)
- S-18 **11.15-11.30** Organotypic culture slices of rat cerebellum to study antivirals against tick-borne encephalitis virus – Nicole Lenz, Bern (CH)
- S-19 **11.30-11.45** Pathogen prevalence in ticks parasitizing humans; a citizens science application – Rahel Ackermann-Gäumann, Spiez (CH)
- S-20 **11.45-12.00** Collecting ticks and tick-bite data by users of the smartphone app "Zecke – Tick Prevention" – Reto Lienhard, La Chaux-de-Fonds (CH)

12.00-14.00 Lunch break &amp; Posters SSM

## 12.45-13.45



### Exclusive Symposium on Maldi-Tof

CÉSAR ROUX

Chair: Sander Slingerland, Product Specialist Microbiology ; Bruker Daltonik GmbH, Bremen (DE)

**12.45-13.15** **A rapid blood culture workflow: the ongoing (r)evolution for identification and selected resistance testing** – Miriam Cordovana, Operative Unit of Microbiology - S. Orsola-Malpighi - University Hospital, Bologna (IT)

**13.15-13.45** **Expanding the scope of Maldi-Tof – towards new applications in clinical microbiology** – Sander Slingerland, Product Specialist Microbiology, Bruker Daltonik GmbH, Bremen (DE)

## 14.00-15.30

### Session 6

#### Combating antibiotic resistance [NRP72]

CÉSAR ROUX

Co-chairs : Julia Vorholt, Zurich ; Christoph Dehio, Basel

**14.00-14.30** **Ecology- and genome-guided natural product discovery**  
Jörn Piel, Zurich (CH)

#### Submitted talks

S-21 **Evolution of Tolerance shapes evolution of antimicrobial Resistance** – Isabelle Santi, Basel (CH)

S-22 **Engineering peptidoglycan hydrolases as specific antimicrobials for treatment of Staphylococcus aureus infections**  
– Martin J. Loessner, Zurich (CH)

S-23 **Do Long-term Land-use practices Affect Soil Bacterial and Viral Profiling, Antimicrobial Resistance Evolution and Spread ?**  
– Elena Gómez-Sanz, Zurich (CH)

S-24 **Procalcitonin and lung ultrasonography point-of-care testing to decide on antibiotic prescription in patients with lower respiratory tract infection at primary care level: a pilot study**  
– Loïc Lhopitallier, Lausanne (CH)

\* Student Paper

## 14.00-15.30

### Session 7

#### Microfluidics and innovative diagnostic tests

ALEXANDRE YERSIN

Co-Chairs : Franziska Suter, Bern ; Antony Croxatto, Lausanne

**14.00-14.30** **Microbiome-on-a-Chip: Exploring microbial interactions at the cellular level using microfluidic technology**  
Claire Stanley, Zurich (CH)

#### Submitted talks

S-25\* **Evaluation of EDTA- and DPA-based tests for detecting Mcr producers** – Mathieu Clément, Bern (CH)

S-26 **Bacterial Microcolonies in Gel Beads for High-Throughput Screening** – Yolanda Schaerli, Lausanne (CH)

S-27 **Performance evaluation of Accelerate Pheno system in antimicrobial susceptibility testing of highly resistant bacteria strains in bloodstream infection, compared to standard laboratory testing**  
– Cinzia Zehnder, Lugano (CH)

S-28 **Incorporation of liquid-based-microbiology enhances diagnostic outcome of Neisseria gonorrhoeae in asymptomatic female carriers** – Anna Roditscheff, Bern (CH)

### Session 8

#### Innate immunity

AUGUSTE TISSOT

Co-chairs : Hector Moreno, Lausanne ; Matthias Schweizer, Bern

**14.00-14.30** **Innate immune cells in pigs: variations of the same tune?**  
Artur Summerfield, Bern (CH)

**14.30-15.00** **Role of Interferon-Lambda in Host Defense against Influenza Viruses**  
Peter Staehli, Freiburg (DE)

#### Submitted talks

S-29 **Cell-to-cell phenotypic heterogeneity in macrophage-Mycobacterium tuberculosis interaction** – Chiara Toniolo, Lausanne (CH)

\* Student Paper

## 14.00-15.30

Session 9 **Host pathogen interaction & Invasion** **CHARLOTTE OLIVIER**  
Co-chairs: Sonja-Verena Albers, Freiburg; Stefan Kunz, Lausanne

**14.00-14.30 Identification of the bat influenza virus receptor**  
Silke Stertz, Zurich (CH)

### Submitted talks

S-30 **14.30-14.45 Identification and characterization of a *W. chondrophila*-specific inclusion membrane protein (Inc) secreted by the Type III Secretion System** – Carole Kebbi Beghadi, Lausanne (CH)

S-31 **14.45-15.00 Type VI secretion in plant-beneficial *Pseudomonas protegens* contributes to gut microbiome invasion and pathogenicity towards a plant pest insect** – Christoph Keel, Lausanne (CH)

S-32\* **15.00-15.15 Elucidation of the molecular microenvironment of coronavirus replicase complexes reveals close association with the host cell translation machinery** – Philip Vkovski, Bern (CH)

Session 10 **Intracellular bacteria** **MATHIAS MAYOR**  
Co-chairs: Carole Kebbi-Beghdadi, Lausanne; Volker Thiel, Bern

**14.00-14.30 Formation of a pathogen vacuole according to *Legionella***  
Hubert Hilbi, Zurich (CH)

### Submitted talks

S-33 **14.30-14.45 Waddlia chondrophila plasmid: a genetic tool to understand the biology of Chlamydia-related bacteria** – Silvia Ardissonne, Lausanne (CH)

S-34\* **14.45-15.00 Characterization of cell division mechanisms of Waddlia chondrophila, a chlamydia-related bacterium** – Firuza Bayramova, Lausanne (CH)

S-35\* **15.00-15.15 New approaches for in vitro assays to evaluate the antibiotic susceptibility of chlamydia** – Hanna Marti, Zurich (CH)

S-36 **15.15-15.30 Lessons learned from a false-negative result with a laboratory-developed legionella pneumophila PCR in an external quality control challenge** – Alexis Dumoulin, Sion (CH)

**15.30-16.00 Coffee break**

## 16.00-17.30

Session 11 **Combating Antibiotic Resistance [NRP72]** **CÉSAR ROUX**  
Co-chair: Julia Vorholt, Zurich; Christoph Dehio, Basel

**16.00-16.30 The mechanism of outer membrane protein insertion by BamA and its role as a target for novel antibiotics**  
Sebastian Hiller Odermatt, Basel (CH)

### Submitted talks

S-37 **16.30-16.45 Optimised use of antibiotics in acute care hospitals: a multi-center cluster-randomized trial** – Laurence Senn, Lausanne (CH)

S-38\* **16.45-17.00 Contribution of natural competence to antimicrobial resistance in *Acinetobacter baumannii*** – Nina Vesel, Lausanne (CH)

S-39 **17.00-17.15 Assessing phylogenetic relatedness and plasmid transmission in ESBL-producing enterobacteriaceae** – Lisandra Aguilar-Bultet, Basel (CH)

S-40 **17.15-17.30 Rapid nanomotion-based antibiotic susceptibility test** – Sandor Kasas, Lausanne (CH)

Session 12 **Lay communication** **ALEXANDRE YERSIN**  
Co-chairs: Carole Kebbi-Beghdadi, Lausanne; Karl Perron, Geneva

**16.00-16.30 Importance of communication**  
Victor Cid, Madrid (ES)

### Submitted talks

S-41 **16.30-16.45 Board and card games involving microbes: anxiogenic or educational?** – Gilbert Greub, Lausanne (CH)

S-42 **16.45-17.00 KROBS: an innovative game to develop people's awareness of pathogenic microorganisms** – Carole Kebbi Beghdadi, Lausanne (CH)

S-43 **17.00-17.15 "break'd!": supporting educators with up-to-date microbiological research** – Massimo Caine, Genève (CH)

S-44 **17.15-17.30 Getting to know microbes: outreach activities in the Cadagno region** – Cristina Frago Corti, Manno (CH)

\* Student Paper



16.00-17.30

Session 13 **Bacterial toxins & Cell microbiology** **AUGUSTE TISSOT**  
Co-chairs: Justine Collier, Lausanne; Patrick Linder, Geneva

**16.00-16.30** **Disassembly of Functional Membrane Microdomains inhibit MRSA penicillin resistance**  
Daniel Lopez, Madrid (ES)

**Submitted talks**

S-45 **16.30-16.45** **Pilus locus organization is a key virulence determinant in *Streptococcus gallolyticus* causing infective endocarditis**  
– Christoph Jans, Zurich (CH)

S-46 **16.45-17.00** **One step back, two steps forward: Toxin-antitoxin modules and persister formation of *Escherichia coli***  
– Alexander Harms, Copenhagen (DK)

S-47\* **17.00-17.15** **A reservoir for *Salmonella* conjugative plasmids in the intestinal mucosa** – Erik Bakkeren, Zurich (CH)

S-48\* **17.15-17.30** **In situ architecture, function and evolution of a contractile injection system** – Désirée Boeck, Zurich (CH)

Session 14 **Microbial evolution** **CHARLOTTE OLIVIER**  
Co-chairs: Sara Mitri, Lausanne; Nicolas Jacquier, Lausanne

**16.00-16.30** **Microbial evolution**  
Steven Ball, Lille (FR)

**16.30-17.00** **Marseillevirions proteomic to get into marseilleviridae physiology**  
Sandra Jeudy, Marseille (FR)

**Submitted talks**

S-49 **17.00-17.15** **Adaptation to new environment: the ph challenge** – Rita Di Martino, Lausanne (CH)

S-50\* **17.15-17.30** **Endofungal bacteria – New insights into bacterial-fungal coexistence** – Andrea Lohberger, Neuchâtel (CH)

\* Student Paper

16.00-17.30

Session 15 **Viral hepatitis** **MATHIAS MAYOR**  
Co-chairs: Dagmara Szkolnicka, Lausanne; Jérôme Gouttenoire, Lausanne

**16.00-16.30** **Innate immune response to hepatitis C virus infection**  
Markus Heim, Basel (CH)

**Submitted talks**

S-51 **16.30-16.45** **Recombinant hepatitis E viruses harboring tags in the ORF1 protein** – Dagmara Szkolnicka, Lausanne (CH)

S-52 **16.45-17.00** **Palmitoylation determines the membrane association and subcellular localization of hepatitis E virus ORF3 protein**  
– Jérôme Gouttenoire, Lausanne (CH)

S-53 **17.00-17.15** **Hepatitis E in a one-year old child led to the identification of transfusion-associated Hepatitis E virus infections**  
– Marcus Panning, Freiburg (DE)

S-54 **17.15-17.30** **Detection of Hepatitis E virus (HEV) RNA in Raw Sausages and Raw Sausages Containing Pig Liver from Retail Level in the Southern Part of Switzerland**  
– Magdalena Nüesch-Inderbilen, Zurich (CH)

**18.00-night** **Olympic Museum: visit – apero – gala dinner**

\* Student Paper

Co-chair: Claire Bertelli, Lausanne; Patrice Nordmann, Fribourg

## 09.00-09.30

Keynote 3 **Metagenomics & intestinal microbiota** **CÉSAR ROUX**  
**High-throughput sequencing meets cultivation for novel Insights into mammalian gut bacteria**  
Thomas Clavel, Aachen (DE)

## 09.30-10.00

Keynote 4 **Antibiotic resistance** **CÉSAR ROUX**  
**Antibiotic resistance in the environment**  
Pilar Junier, Neuchâtel (CH)

## 10.00-10.30 Coffee break

## 10.30-12.00

Session 16 **Metagenomics** **CÉSAR ROUX**  
Co-chairs: Claire Bertelli, Lausanne; Vladimir Lazarevic, Geneva

**10.30-11.00 Nutrition & metagenomics**  
Laurence Genton, Geneva (CH)

**Submitted talks**

S-55 **11.00-11.15** **Stunted childhood growth is associated with decompartmentalization of the gastrointestinal tract and overgrowth of oropharyngeal taxa** – Pascale Vonaesch, Paris (FR)

S-56\* **11.15-11.30** **“Fondue Chinoise” as a potential source of campylobacteriosis: whole genome sequencing (WGS) surveillance over 2 years in Basel, Switzerland** – Josiane Reist, Basel (CH)

S-57 **11.30-11.45** **Community-acquired blood culture-negative infective endocarditis case elucidated by clinical metagenomics** – Vladimir Lazarevic, Geneva (CH)

S-58 **11.45-12.00** **Ecology of human lung microbiota and its impact on the host** – Sudip Das, Lausanne (CH)

## 10.30-12.00

Session 17 **Cell surface structures in prokaryotes** **ALEXANDRE YERSIN**  
Co-chairs: Mélanie Blokesch, Lausanne; Patrick Linder, Geneva

**10.30-11.00 Assembly of the archaeum and its motor complex**  
Sonja-Verena Albers, Freiburg (DE)

### Submitted talks

S-59 **11.00-11.15** **Investigating the antibacterial mode of action of an anticancer peptide** – Nicolas Jacquier, Lausanne (CH)

S-60\* **11.15-11.30** **Antimicrobial Peptide Dendrimers from Chemical Space and their Mechanism of Action** – Bee Ha Gan, Bern (CH)

S-61\* **11.30-11.45** **Listeria monocytogenes L-form cells, rebuilding the wall for cell virulence** – Virginie Grosboillot, Zurich (CH)

S-62 **11.45-12.00** **DNA-uptake pilus of Vibrio cholerae capable of kin-discriminated auto-aggregation** – David Adams, Lausanne (CH)

Session 18 **Zoonotic pathogens** **AUGUSTE TISSOT**  
Co-chairs: Sylvia Rothenberger, Lausanne; Jérôme Gouttenoire, Lausanne

**10.30-11.00 Tick borne encephalitis: spotlights on epidemiology and research**  
Stephen Leib, Bern (CH)

### Submitted talks

S-63 **11.00-11.15** **The hidden risk in snake breeding: an anecdote of human leptospirosis** – Sabrina Rodriguez-Campos, Bern (CH)

S-64\* **11.15-11.30** **Analysis of the zoonotic potential of the Influenza D virus for humans** – Melle Holwerda, Bern (CH)

S-65 **11.30-11.45** **Isolation, characterization and rapid human adaptation of tick-borne tamiami virus** – Hector Moreno, Lausanne (CH)

S-66\* **11.45-12.00** **Phosphatidylserine receptors TIM-1 and Axl promote hantavirus infection** – Jennifer Mayor, Lausanne (CH)\* Student Paper

\* Student Paper

## 10.30-12.00

Session 19 **Microbial pathology & Immunity** **CHARLOTTE OLIVIER**  
Co-chairs : Salomé Leibundgut, Zurich ;  
Dominique Sanglard, Lausanne

**10.00-10.30** **An unexpected role for neutrophils in the pathology of cutaneous leishmaniasis**  
Fabienne Tacchini-Cottier, Lausanne (CH)

**10.30-11.00** **IL-17-mediated antifungal immunity at the interface between commensalism and disease**  
Salomé Leibundgut, Zurich (CH)

### Submitted talks

S-67\* **Th17 cell immunity to the commensal fungus Candida albicans**  
**11.00-11.15** – Florian Kirchner, Zurich (CH)

S-68 **Is Antifungal Treatment Needed in Non-Candidemic Patients with a Positive Catheter Tip Culture for Candida ? A Multi-Center Cohort Study of the Fungal Infection Network of Switzerland (FUNGINOS)** – Yvonne Schmiedel, Bern (CH)

Session 20 **Mycobacteria** **MATHIAS MAYOR**  
Co-chairs : Katia Jaton, Lausanne ; Lloyd Vaughan, Zurich

**10.30-11.00** **Role of ESCRT and autophagy machineries in membrane repair and mycobacteria restriction**  
Thierry Soldati, Geneva (CH)

### Submitted talks

S-69\* **Genomics of Mycobacterium kansasii, does horizontal gene transfer mediate pathogenicity ?** – Florian Tagini, Lausanne (CH)

S-70 **Molecular epidemiology integrating whole genome sequencing, a powerful approach for the investigation of Mycobacterium tuberculosis outbreaks** – Fathiah Zakham, Lausanne (CH)

S-71 **Lung-on-a-chip microtechnologies for studies of host-pathogen interactions in M. tuberculosis infections** – Vivek Thacker, Lausanne (CH)

S-72 **Whole genome sequencing characterization of an isoniazid resistant Mycobacterium tuberculosis strain undetected by conventional molecular methods** – Onya Opota, Lausanne (CH)

**12.00-14.00 Lunch break & Posters SSM\* Student Paper**

## 12.45-13.45



**Exclusive Symposium** **CÉSAR ROUX**  
Co-chairs : Alix Coste, Lausanne & Jacques Schrenzel, Geneva



**Ast – Bacteriology in routine – Camera and image analysis of Automatization**  
Theo Liebrechts – Oliver Nolte – Giovanni Turra

**12.45-13.05** **Workflow, organisation and economical impact of disk-diffusion AST using WASPLab** – Theo Liebrechts PAMM, Veldhoven (NL)

**13.05-13.25** **I robot – Insights from inside and outside a lab-automation in bacteriology** – Oliver Nolte Zentrum für Labormedizin, St.Gallen (CH)

**13.25-13.45** **Computer Vision, Machine Learning and Deep Learning Engineer** – Giovanni Turra Copan Group R&D (I)

## 14.00-15.30

Session 21 **Diagnostic microbiology** **CÉSAR ROUX**  
Co-chairs : Nadia Liassine, Geneva ; Onya Opota, Lausanne

**14.00-14.30** **Applications of nanosensors in medical microbiology**  
Giovanni Dietler, Lausanne (CH)

### Submitted talks

S-73 **Phylogeographical analysis reveals the historic origin, emergence and evolutionary dynamics of methicillin-resistant Staphylococcus aureus ST228 in Switzerland** – Dominique Blanc, Lausanne (CH)

S-74\* **Comparison of classical microscopy and culture with the See-gene Allplex™ BV Assay for laboratory diagnosis of Bacterial vaginosis** – Shawmiya Ratnasabapathy, Bern (CH)

S-75 **To be or not to be molecular? Application to Streptococcus agalactiae screening in late pregnancy** – Marie-Lise Tritten, Chaux-de-Fonds (CH)

S-76 **Evaluation of Xpert MTB/RIF Ultra, the new highly sensitive molecular point-of-care Test for tuberculosis diagnosis** – Onya Opota, Lausanne (CH)

\* Student Paper

## 14.00-15.30

Session 22 **Environmental microbiology** **ALEXANDRE YERSIN**  
Co-chairs: Tamar Kohn, Lausanne; Jan van der Meer, Lausanne

### Submitted talks

- S-77\* **14.00-14.15** **Low molecular weight organic acids as key molecules in bacterial-fungal Interactions** – Fabio Palmieri, Neuchâtel (CH)
- S-78\* **14.15-14.30** **Targeted mycophagous lifestyle of Lysinibacillus sphaericus against the phytopathogenic fungus Rhizoctonia solani** – Isha Jamil, Neuchâtel (CH)
- S-79 **14.30-14.45** **High time-resolution simulation of E. coli on Vietnamese farmers' hands based on videography and environmental microbial sampling** – Tim Julian, Dübendorf (CH)
- S-80\* **14.45-15.00** **Iron reduction by the fermentative Gram-positive bacterium Clostridium Acetobutylicum** – Cornelia List, Lausanne (CH)
- S-81 **15.00-15.15** **Detection and genomic diversity of Escherichia coli from soils and fecal sources in households in rural Bangladesh** – Maria Camila Montealegre, Dübendorf (CH)
- S-82\* **15.15-15.30** **Changing the ligand-binding specificity of Escherichia coli periplasmic binding protein RbsB by rational design and screening** – Diogo Tavares, Lausanne (CH)

Session 23 **Microbial pathology and Cell microbiology** **AUGUSTE TISSOT**  
Co-chairs: Dominique Soldati-Favre, Geneva; Stephan Gruber, Lausanne

- 14.00-14.30** **Insight in the biology of toxoplasma**  
Dominique Soldati-Favre, Geneva (CH)
- 14.30-15.00** **Microbial pathology: Difference or similarities of different pathogens in different species, having zoonotic relevance?**  
Maja Ruetten, Tagelswangen (CH)

### Submitted talks

- S-83 **15.00-15.15** **Visualization of sterols with a bacterial toxin bio-sensor reveals a novel sterol internalization pathway** – Magdalena Marek, Lausanne (CH)
- S-84\* **15.15-15.30** **Hsp90 Controls Caspofungin Paradoxical Effect of Aspergillus fumigatus via the Mitochondrial Respiratory Chain** – Marion Aruanno, Lausanne (CH)

## 14.00-15.30

Session 24 **Bacterial genomics** **CHARLOTTE OLIVIER**  
Co-chairs: Carmen Buchrieser, Paris; Hubert Hilbi, Zurich

- 14.00-14.30** **The Legionella genus genome: evolution of an environmental pathogen**  
Carmen Buchrieser, Paris (FR)

### Submitted talks

- S-85 **14.30-14.45** **A comparative genomics database of the phylum Chlamydiae** – Trestan Pillonel, Lausanne (CH)
- S-86 **14.45-15.00** **Building an open source bioinformatic pipeline for routine high throughput sequencing in a microbiology diagnostic lab** – Sacha Laurent, Lausanne (CH)
- S-87\* **15.00-15.15** **Challenges in using whole genome sequencing for pseudomonas aeruginosa investigation** – Bárbara Magalhães, Lausanne (CH)
- S-88 **15.15-15.30** **Air-conditioner cooling towers as complex reservoirs and continuous source of Legionella pneumophila infection evidenced by genomic analysis** – Daniel Wüthrich, Basel (CH)

Session 25 **Innovative non mammalian models (3R session)** **MATHIAS MAYOR**  
Co-chairs: Yolanda Schaerli, Lausanne; Thierry Soldati, Geneva

- 14.00-14.30** **Fish: Vertebrate hosts and models for intracellular bacterial infections**  
Lloyd Vaughan, Zurich (CH)

### Submitted talks

- S-89 **14.30-14.45** **Phenotypic heterogeneity of the honey bee gut symbiont Frischella perrara - an important trait for host colonization?** – Konstantin Schmidt, Lausanne (CH)
- S-90\* **14.45-15.00** **Bacterial coexistence within species in the honey bee gut facilitated by nutritional niche differentiation** – Silvia Brochet, Lausanne (CH)
- S-91 **15.00-15.15** **A root colonizing plant-beneficial pseudomonad persists in herbivorous insects throughout different developmental stages and can be dispersed to new host plants** – Monika Maurhofer, Zurich (CH)
- S-92\* **15.15-15.30** **Predatory behavior of Vibrio cholerae towards bacteria and amoebae** – Natalia Carolina Drebes Dörr, Lausanne (CH)

**15.30-16.00** **Coffee break**

**16.00-16.30**

**16.00-16.30 SSM Poster Awards and  
“SSM career encouragement award”**

**CÉSAR ROUX**

**16.30-17.00**

Keynote 5      Chair: Gilbert Greub, Lausanne

**CÉSAR ROUX**

## Leishmania parasites and associates

**17.00**      **End of meeting**

# Notes

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# Storö

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## Location



## Arrival

- By car Exit motorway « Lausanne-Vennes / Hôpitaux »  
Take the « Route de Berne » at the traffic lights  
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The auditoire is at the entrance on your left, at the exit of the parking
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