

# SSM Annual Report 2022

## INFO 70



The Swiss Society for Microbiology (SSM) is a professional association with more than 550 members mainly from Switzerland but also from other countries, all working in the field of human and veterinary medical microbiology, molecular microbiology, environmental microbiology, virology and mycology.

[www.swissmicrobiology.ch](http://www.swissmicrobiology.ch)

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**Prof. Jacques Schrenzel**

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**President 2022-2024**



**Prof. Pilar Junier**

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**Past President 2019-2021**



**Prof. Christof Holliger**

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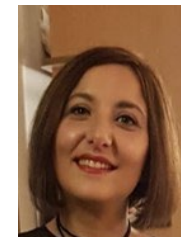
**Treasurer**



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**General Secretary**



**Prof. Hubert Hilbi**

University of Zürich  
Institute of Medical Microbiology  
Gloriastrasse 30  
8006 Zürich  
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**Molecular Microbiology  
Section**



**Prof. Adrian Egli**

Head Clinical Bacteriology/Mycology  
University Hospital Basel  
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**Clinical Microbiology  
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**Prof. Volker Thiel**

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**Virology Section**



**Dr. David Johnson**

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Technology (Eawag)  
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**Environmental  
Microbiology Section**



**Dr. Alix Coste**

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**Mycology Section**



**Prof. Gilbert GREUB**

Directeur de l'institut de Microbiologie et Chef de Service  
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**Lay Communication Section**



**Dr. Florian Tagini, MD-PhD**

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**Early Career**





Dear Members,

This year, we will celebrate the 80th anniversary of the SSM at our annual meeting. It will be an opportunity to continue the cross-collaboration between the SSM and the two new NCCRs and NRPs related to microbiology in Switzerland. It will also allow us to meet physically and to exchange, two cardinal elements in our social and professional life that we had to put aside drastically during the pandemics... It is a kind of social rebirth!

One could say that 80 years is a respectable age (and it is perfectly true), but we prefer to insist on the youth of our Society.

Our Society is young in that it embraces current electronic tools: we rely on electronic means of communication (Twitter and LinkedIn) to disseminate new information to our members, and we will soon unveil an updated version of our website. We recognize the importance of communicating the breadth and depth of the field of microbiology. We have learned during pandemics that proper communication with the general public is of paramount importance. To this end, our youngest section, "Lay communication" is very active on our website:

<https://www.swissmicrobiology.ch/en/sections/lay-communication!>

We are also keen to promote microbiology among our younger colleagues and have therefore appointed Dr Florian Tagini to our committee as representative of young researchers. But we would also very much like other young colleagues to get involved in our committee (for all members, there are also three open positions: head of Molecular Microbiology commission, head of Lay Communication commission and President Elect).

Finally, the Clinical Microbiology section is resurrecting the former Club de Pathologie, by organizing a national meeting day (June 23, in Neuchâtel - Club de Microbiologie), to foster interactions between microbiologists and infectious diseases specialists and to promote scientific exchanges. This scheme will be extended by monthly webinars, entirely free of charge, and planned to take place every third Thursday between noon and 1pm.

Details to follow, on our website, on LinkedIn and Twitter.

Happy 80th birthday! Stay young with SSM!

Microbiologically yours!

Jacques SCHRENZEL

*President SSM 2022 to 2024*

# NEW CANDIDATES FOR THE COMMITTEE

There are open positions for the SSM committee.

Below are the suggested candidates to be elected at the General Assembly.

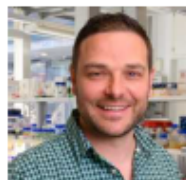
Section	Current Head	New candidate to be elected
Molecular Microbiology	Hubert Hilbi	Martin Pilhofer
Lay Communication	Gilbert Greub	Pilar Junier
Function		New candidate to be elected
President Elect 2025-2027		Hubert Hilbi

The CV of the different candidates are on the coming pages.

# Martin Pilhofer: Candidate to be elected as head of Molecular Microbiology section

Martin Pilhofer | ETH Zürich

Curriculum vitae



## Personal Information

Martin PILHOFER | Born: 5. April 1980 | Nationality: German | ORCID: 0000-0002-3649-3340  
Website: <http://www.pilhoferlab.ethz.ch>

## Areas of Interest

cryo-electron microscopy | cell-cell interactions | evolution | contractile injection systems

## Education and Training

11/2008–12/2013 **Postdoc** with Grant J. Jensen  
Caltech and Howard Hughes Medical Institute, Pasadena, CA, USA  
11/2004–07/2008 **PhD** (“*summa cum laude*”) with Karl-Heinz Schleifer  
Technical University Munich, Germany  
11/1999–09/2004 **Diploma** (“*with distinction*”) in Biology  
University of Bayreuth and Technical University Munich, Germany

## Employment History

since 06/2019 **Associate Professor**  
Institute of Molecular Biology & Biophysics  
ETH Zürich, Department of Biology  
02/2014-05/2019 **Assistant Professor**  
Institute of Molecular Biology & Biophysics  
ETH Zürich, Department of Biology

## Institutional Responsibilities

2020 Member | Faculty Hiring Committee | Department of Biology  
since 10/2019 Chair | Institute of Molecular Biology & Biophysics  
since 10/2019 Chair | Steering Board | Cryo-Electron Microscopy Knowledge Hub  
since 05/2019 Vice-chair | Steering Board | Scientific Center for Optical and Electron  
Microscopy  
since 07/2018 Member | Strategy Committee of the Department of Biology

## Memberships in International Panels

05/2022 Member | Review Panel | Structural & Computational Biology Unit | EMBL  
2020 Member | Group Leader Hiring Committee | EMBL  
2020 Member | Group Leader Hiring Committee | EMBL  
2020 Member | Faculty Hiring Committee | University of Basel  
02/2020 Member | Special Review Panel | Wellcome Trust | London  
since 12/2019 Member | Advisory Board | Review Commons | [reviewcommons.org](http://reviewcommons.org)

## Awards

2020 ERC Consolidator Grant | 2022-2026  
2018 EMBO Young Investigator | 2019-2022  
2016 ERC Starting Grant | 2017-2021

## Major scientific achievements in the last five years

Our goal is to establish multiscale models of bacterial cell-cell interactions in order to understand structure, mechanism, function and evolution. **Towards this goal, we (1) investigate microbial cell-cell interactions and (2) develop enabling imaging techniques.**

### 1. Bacterial cell-cell interactions

#### 1.1. Bacterial contractile injection systems (CISs) – structure, mechanism and evolution

The main focus of the lab is to understand the how bacterial contractile injection systems (CISs) mediate interactions of bacteria with other cells. In 2012, I co-authored a landmark study that uncovered the mechanism of bacterial Type 6 secretion systems (T6SSs): they act as CISs employing an inverted contractile phage tail [\*Basler/\*Pilhofer et al., 2012; 570 citations]. More recently, our lab revealed the structure of the T6SS trans-envelope complex [29], the novel mechanistic feature of bi-directional firing [30], and we contributed to the understanding of effector loading [35]. These insights are significant, since the classical T6SSs play important roles in different biological settings including bacterial competition, defense, symbiosis and pathogenicity.

Besides research on classical T6SS, we invested a major effort into characterizing a phylogenetically diverse group of CISs that is found across all major bacterial phyla. In 2014, I co-authored a landmark study that showed the structure and function of one of the first characterized *extracellular* contractile injection systems (eCISs), which are released from the cell and bind to their target cell surface [\*Shikuma/\*Pilhofer et al. 2014; 200 citations]. Subsequently, we found that these eCISs induce the metamorphosis of marine tubeworm larvae by loading an effector into the inner tube lumen [34].

In 2017, we investigated a very closely related gene cluster in a bacterial symbiont of amoebae, and we surprisingly found that it formed bundles of T6SSs-like structures [24]. The co-existence of different modes of action (eCISs and T6SSs) in such closely related gene clusters was particularly exciting, since it gives insight into the evolution of CISs. The study also revealed first insight into the conformational changes, which the baseplate of a T6SS undergoes upon firing.

Intrigued by the mechanistic and structural diversity of these CISs, we recently discovered a new, third mode of action of CISs in multicellular cyanobacteria [47]. These CISs are anchored in the thylakoid membranes and function upon the induction of ghost cell formation upon stress. Besides the impact on programmed cell death and cyanobacterial cell biology, the study presents an example of a true multiscale study, integrating data from light microscopy, cryo-electron tomography and single particle cryoEM. Finally, the study revealed a hotspot for evolutionary re-engineering in order to adapt CISs to different functions by generating novel *in situ* localizations which result in new modes of action.

Another recent major contribution from the lab on this topic was the identification and characterization of eCISs in the marine bacterium *Algoriphagus* [46]. Also this system is closely related to the systems described above and our atomic model revealed intriguing new structural components that are conserved among many other CIS. Importantly, we provide the field with a new model system, since we developed genetic tools to study CISs in their natural host. By employing a feedback loop between structure determination, genetic mutations and functional assays, we provide mechanistic insight into CIS function, e.g. into the cage, cap adaptor and plug components.

Taken together, our discoveries and studies of divergent CISs had major impact and shaped the field, since they present a unique opportunity to understand the conserved core of the apparatus, as well as specific adaptations. The combination of *in situ* architecture (revealing mode of action) with high-resolution structures (generating atomic models), now provide the basis for re-engineering the systems for further investigations but also as novel tools as antibacterial agents or for drug delivery.

#### 1.2. Septal junctions – a gap junction analog for cell-cell communication in multicellular bacteria

Sister cells in multicellular cyanobacteria communicate with each other by transport traversing the septum via septal junctions. In a landmark study [32], we revealed the *in situ* structure of septal junctions, and we showed that communication can be controlled by a conformational change. Recently, we identified a new factor that is essential for assembly and gating [48]. Our findings are significant for bacterial cell biology and impact hypotheses on the evolution of multicellularity.



### 1.3. Uromodulin – a human defense mechanism against urinary tract infections

In two interdisciplinary, collaborative studies [40/41], we made seminal contributions to the understanding of the structure and mechanism of Uromodulin, the most abundant protein in human urine. We revealed the molecular basis of interactions between Uromodulin and uropathogens. Our data explained the mechanism by which Uromodulin encapsulates bacterial pathogens and prevents urinary tract infections. Our insight may lead to novel treatment strategies in the future.

### 1.4. Host-bacterium interactions of intracellular pathogens

Furthermore, the lab engaged in understanding host-pathogen interactions of infections by *Salmonella* (aspects of cell invasion and dissemination) [36/38], *Legionella* (role of the Type 4 secretion system in attachment to the vacuole) [44] and *Shigella* (septin cage structure) [43].

## 2. Development of imaging methods

### 2.1. Fluorescent labeling and cryo-light microscopy

Cryo-light microscopy has proven valuable for identifying rare events for cryotomography imaging. The introduction of relatively large fluorescent tags, such as GFP, however, often interferes with localization, assembly and function. We tackled the issue of tagging the inner tube of the T6SS fluorescently by developing an approach based on orthogonal translation. This allowed us to label the T6SS inner tube protein Hcp with a fluorescent amino acid. Using this novel tag enabled us to identify extended, pre-firing T6SS apparatuses by cryo-light microscopy for subsequent cryo-electron tomography imaging [30].

We also recently installed a cryo-light microscope based on an Airyscan2 confocal instrument. Together with Zeiss, we are implementing new hardware, such as high NA cryo-objectives, and workflows, such as correlation in 3D.

### 2.2. Cryo-focused ion beam milling

Since cryo-electron tomography is limited to thin samples, much effort in the field has been on developing cutting-edge cryo-sample thinning methods. Cryo-focused ion beam milling can be used to generate thin lamellae in an almost artifact-free manner. Our lab has developed a workflow and sample holder (in collaboration with Leica) that allowed for reproducibly thinning a wide range of cell types to generate high-quality samples for cryoET imaging [27]. Our study on a T6SS was the first report of applying this technology to image bacteria inside their host [24]. Since cryo-FIB milling is a low-throughput method requiring a large amount of manual user input over extended time periods, we furthermore tackled the question whether the procedure can be automated. Together with Zeiss, we developed a method for the automation of sequential milling of multiple targets [37]. The method enabled us to tackle questions that were otherwise inaccessible, and it has now been implemented by multiple other research institutions.

### 2.3. Cryo-electron tomography data collection

The data collection process for cryo-electron tomography is relatively time-consuming. Enabled by novel detectors and more stable stages, we improved data collection routines that resulted in shorter data acquisition times, higher robustness, and excellent data quality [33].

### 2.4. Sample preparation and workflows for complex samples

CryoET imaging shows great potential for its future application to more complex samples such as patient samples, biopsies or environmental samples. A first step towards these applications was taken in our recent study on Uromodulin, investigating patient samples [40]. We are currently engaged in further improving the methods and adapting them to investigating environmental samples, organoids and biopsies.

## Pilar Junier: Candidate to be elected as head of Lay Communication section

CV Pilar Junier 03.06.2022

### Dr Pilar JUNIER

Born 11.04.1978, Swiss/Colombian, Married, 3 children

Full Professor in Microbiology, Laboratory of Microbiology, Institute of Biology, University of Neuchâtel, Rue Emile-Argand 11, CH-2000, Neuchâtel, Switzerland; Phone +41 32 71822244, [pilar.junier@unine.ch](mailto:pilar.junier@unine.ch); OrcID: 0000-0002-8618-3340; Google scholar link: <https://scholar.google.com/citations?user=0t7n5jAAAAAJ&hl=en>; Research gate profile: <https://www.researchgate.net/profile/Pilar-Junier>.



### 2. Education.

Ph.D., University of Chile, Santiago de Chile, Chile, Faculty of Sciences, Department of Ecology, 2004

Biologist (equivalent to a Master), Major in Genetics, National University of Colombia, Bogota, Colombia, 2000

### 3. Employment history

2015-present Full Professor, Laboratory of Microbiology, Institute of Biology, University of Neuchâtel, Rue Emile-Argand 11, CH-2000, Neuchâtel, Switzerland

2010-2015 Assistant Professor, Laboratory of Microbiology, Institute of Biology, University of Neuchâtel, Rue Emile-Argand 11, CH-2000, Neuchâtel, Switzerland

2006-2009 Post-doctoral researcher, Swiss Federal Institute of Technology, Lausanne, Switzerland

2004-2006 Post-doctoral researcher, Max-Planck Institute for Evolutionary Biology, Ploen, Germany

### 4. Institutional responsibilities.

Vice-Dean of the Faculty of Science.

President of doctoral school in Microbial Sciences, CUSO, 2015-2021. Representative at the CUSO doctoral school of Staromics, 2011-on; Vice-director of Teaching, Institute of Biology – 2016-2021. President of the Master program in Biogeosciences –U. Neuchâtel/U. Lausanne, 2012-2016. Academic representative for the Bachelor in Biology and Ethnology, UniNE, 2013-on.

### 5. Approved research projects (current funding only)

07.17-03.23: Bacterial:Fungal Interactions and Their Role in Soil Functioning. US Department of Energy (Co-PI).

04.18-03.22: Lessons from bacterial dormancy: mechanisms, diversity, ecology, and evolution. Swiss National Science Foundation. Division III. Grant 31003A\_179297

03.20-06.22: The Dark and Bright side of the force: using microbes for science education and communication. Swiss National Science Foundation. Program Agora CRAGP3\_191631

01.20-12.23: Redefining geothermal fluid properties at extreme conditions to optimize future geothermal energy extraction. Horizon2020, SEP-210572416 (Co-PI)

03.21-02.25: CaOx: applying ecological theory in the fight against lung fungal pathogens. Swiss National Science Foundation. Program BRIDGE, 40B2-0\_194701

03.21-02.23: Bio-assisted systems for critical metals recovery: from low-grade ores to industrial waters recycling. Innosuisse, 49710.1 IP-EE (as Collaborator)

03.21-08.23: Deciphering the Secret Life of Soil Fungi Using Novel Microfluidic Platforms. Leverhulme Trust. RPG-2020-352 (as Collaborator)

01.22-12.26: CRM-geothermal: Raw materials from geothermal fluids: occurrence, enrichment, extraction. Horizon Europe (Co-PI)

04.22-03.26: Financial Aid: Contract: Monitoring of toxic cyanobacterial blooms. Federal Office for the Environment.

### 6. Supervision of junior researchers at graduate and postgraduate level

PhD theses: Since 2010 advisor of 21 PhD students (Current students: Danae Bregnard; Andrea Corona-Ramirez; Mathilda Fatton; Thierry Kuhn -co-direction; Matteo Buffi -co-direction; Aislinn Estoppey; Camille Tinguely -co-direction; Sami Zhioua; 13 graduated: Daniel Bravo; Tina Wunderlin; Matthieu Bueche, Veronica Bergottini; Sevasti Filippidou; Monica Albini; Lucrezia Comensoli; Wafa Kooli; Anaele Simon; Christophe Paul; Isha Jamil; Fabio Palmieri; Matthias Dreier).

MSc theses: Since 2010 advisor of 21 master students (21 graduated).

*Other:* Post-doctoral researchers: Fabio Palmieri; Isha Jamil (until 2021- Currently Nestle SA, CH); Christophe Paul (until 2021); Sevasti Filippidou (until 2019. Currently Open University, UK); Tina Wunderlin (until 2015). Host or co-host of four Ambizione grantees (currently SNF professor. E. Joseph; D. Gonzalez, Xiang-Yi Li, Ricardo Machado). Expert in 25 PhD committees (University of Neuchâtel, University of Lausanne, University of Geneva, University of Groningen, INRA, University of Zurich, Southern Cross University, University of Fribourg, University of Lorraine, Newcastle University).

#### 7. Teaching activities

*Diversity of life* for 1<sup>st</sup> year students (Unine BSc in Biology, 28h ex-cathedra lectures); *General bacteriology* for 2<sup>nd</sup> year students (Unine BSc in Biology, 28h ex-cathedra lectures and 56h practicals supervision); *Service Learning* for 3<sup>rd</sup> year students (Unine BSc in Biology, 28h lay communication activity - <https://www.unine.ch/lamun/home/service-learning---les-microbes.html>); Seminar for 3<sup>rd</sup> year students (Unine BSc in Biology, 28h ex-cathedra lectures) Lectures in *Geomycology* (Unine-Unil MSc in Biogeosciences, 40h ex-cathedra lectures and practicals/field-work); *Microbial Ecology and seminars* (Unine MSc in biology, 30h ex-cathedra lectures and practicals/field-work).

#### 8. Outreach activities.

15-19.07.2019: Tiny Earth Partner Instructor training (University of Connecticut, Storrs CT).  
Regular participation to outreach activities since 2014: graine de belette, passeport vacances, TechEcole, Université du 3<sup>ème</sup> âge, Agridea workshops, tailored lab workshops for school pupils.

#### 8. Scientific communication activities

Swiss Society of Microbiology (SSM); 2019-2021 President of the Swiss Society of Microbiology (SSM); Member of the American Society for Microbiology; Society for Applied Microbiology; Microbiology Society.

#### 10. Scientific communication activities

Principal organizer of the Swiss Microbial Ecology (SME) meeting 2013; Scientific committee Swiss Society of Microbiology (SSM) meeting 2016, 2017, 2018, 2019, 2020, 2021 (on-line meeting), 2022 (80<sup>th</sup> Anniversary of the SSM; Co-main organizer).

#### 11. Prizes, awards, fellowships.

2000-2004 DAAD fellowship in excellence centers for Latin-American countries for my PhD studies at the University of Chile, Santiago de Chile, Chile.  
2005-2006 Max-Planck Society fellowship for post-doctoral studies at the Max-Planck-Institute for Evolutionary Biology, Ploen, Germany.  
2009-2010 Ambizione Fellowship from the Swiss National Science Foundation, University of Neuchâtel, Neuchâtel Switzerland.  
2021 Credit Suisse best teaching award (co award with Dr. Saskia Bindschedler)

#### 12. Career breaks.

Maternity leaves: 4 months each time after the birth of my three sons (Samuel Junier 27.02.08, Philippe Junier 30.09.11 & Simon Junier 30.10.14)

## Hubert Hilbi: Candidate to be elected as SSM President Elect 2025-2027

### CURRICULUM VITAE

**1. NAME & ADDRESS** Prof. Dr. Hubert Hilbi  
University of Zürich  
Institute of Medical Microbiology  
Gloriastrasse 30, 8006 Zürich, Switzerland  
Tel: +41 (0)44 634 2650  
E-mail: hilbi@imm.uzh.ch  
ORCID: 0000-0002-5462-9301

**PLACE & DATE OF BIRTH** Zug (Switzerland); May 30, 1965  
**NATIONALITY** Swiss  
**MARITAL STATUS** Married to Dr. Xiaodan Li, 2 sons (born 1999, 2001)



### 2. EDUCATION AND SCIENTIFIC CAREER

1/2014-present Professor, head of research unit, University of Zürich, Switzerland  
5/2010-12/2013 Professor, research group leader, Max von Pettenkofer Institute, LMU Munich, Germany  
5/2009-4/2010 Research group leader, Institute of Molecular Life Sciences, University of Zürich  
8/2002-4/2009 SNF Assistant Professor, research group leader, Institute of Microbiology, ETH Zürich  
2/2000-7/2002 Postdoctoral scientist with Prof. H.A. Shuman, Columbia University, New York, USA  
1/1996-1/2000 Postdoctoral scientist with Prof. A. Zychlinsky, NYU Medical Center, New York, USA  
10/1994-12/1995 Postdoctoral scientist with Prof. P. Dimroth, Institute of Microbiology, ETH Zürich, Switzerland  
11/1990-6/1994 Ph.D. student with Prof. P. Dimroth, Institute of Microbiology, ETH Zürich, Switzerland  
10/1985-6/1990 Studies in Biochemistry/Microbiology, Diploma with Prof. T. Leisinger, ETH Zürich, Switzerland

### 3. APPOINTMENTS AND DEGREES

2017 Professor (Associate, *ad personam*), University of Zürich, Switzerland  
2015 Professor (Titularprofessor), University of Zürich, Switzerland  
2010 Professor (W2), Ludwig-Maximilians University (LMU) Munich, Germany  
2009 Lecturer (Privatdozent), Habilitation in Microbiology, Dept. of Biology, ETH Zürich  
2002 Assistant Professor, funded by the Swiss National Science Foundation (SNF)  
1994 Ph.D. in Natural Sciences, ETH Zürich  
1990 Diploma in Natural Sciences (Biochemistry, Microbiology, Immunology, Organic Chemistry), ETH Zürich

### 4. HONORS AND AWARDS

2020 Membership Faculty Opinions (formerly F1000Prime)  
2018 Fellowship American Academy of Microbiology  
2002 SNF Assistant Professorship  
1998, 2000 SNF Fellowship for advanced scientists (2x)  
1996 SNF Fellowship for emerging scientists

### 5. RECENT PROJECTS AND GRANTS AWARDED

8/2022-7/2026 SNF project grant "Subversion of host large GTPases and GTP metabolism by *Legionella*"  
2/2022-1/2023 Novartis foundation for medical-biological research  
"Subversion of oncoprotein activity by *Legionella* effectors"  
1/2022-12/2025 Geberit AG "Induction and resuscitation of viable-but-non-culturable *Legionella*"  
4/2021-3/2025 SNF project grant "Pathogen-phagocyte small molecule inter-kingdom signaling"  
4/2018-3/2022 SNF project grant "Virulence and communication of *Legionella*:  
molecular determinants of pathogen-host cell interactions"  
5/2020-4/2021 Geberit AG "LegioGrowth"  
9/2017 SNF R'Equip grant (coordinator) "Enhanced resolution confocal laser scanning microscope"  
5/2017-4/2018 Novartis foundation for medical-biological research  
"Function of the large dynamin-like GTPase atlastin3/Sey1 for intracellular replication of *Legionella*"  
4/2017-3/2018 OPO foundation "*Legionella* effectors modulating membrane and cytoskeleton dynamics"  
8/2015-9/2016 University of Zürich research grant "Small molecule inter-kingdom communication between the  
pathogen *Legionella* and eukaryotic cells"  
1/2015-12/2017 SNF project grant "Formation of the *Legionella*-containing vacuole:  
effectors targeting retrograde trafficking and microtubules"  
3/2014-2/2018 SNF SystemsX grant "HostPathX" "Modelling and chemical genetics perturbation of the  
phagocyte-mycobacteria interface"  
9/2014-8/2017 European Union "Infect-ERA", project "EUGENPATH" (coordinator)

## Professional interests – Hubert Hilbi

Throughout his international career as a microbiologist, Hubert Hilbi has been interested in how bacteria survive in „extreme“ environments. During his Ph.D. thesis, he analyzed the bioenergetics of a strictly anaerobic environmental bacterium, *Malonomonas rubra*. During his postdoctoral studies and as a research group leader, he explored how intracellular pathogens overcome bactericidal host cells, i.e., how *Shigella flexneri* survives in macrophages, how *Mycobacterium marinum* establishes an intracellular niche in phagocytes, and how *Legionella* species form a replication-permissive compartment in free-living amoebae and mammalian cells.

Current research in the lab of Hubert Hilbi focuses on the topic „Virulence and communication of *Legionella*“. Recent projects comprise (i) the characterization of novel translocated *Legionella* effector proteins that anchor to host phosphoinositide lipids, inhibit the retromer coat complex, or modulate small or large GTPases, (ii) the role of host factors implicated in retrograde trafficking, ER dynamics, or membrane contact sites during intracellular replication of *Legionella*, (iii) the purification and proteomics of intact “*Legionella*-containing vacuoles” from infected phagocytes, and (iv) the analysis of the *Legionella* quorum sensing (Lqs) system and the cognate  $\alpha$ -hydroxyketone signaling molecule LAI-1.

Hubert Hilbi is engaged in various national and international research collaborations, has published 150 scientific papers, and holds a US patent. His publications have been cited more than 8500 times with an *h*-index of 51 (Google scholar). Hubert Hilbi also serves as a reviewer, editor, and advisory board member for various journals, books, academic institutions, and funding agencies. Teaching activities of Hubert Hilbi include lectures and courses for biologists, as well as for biomedical and medical students, and he supervised 19 master students and 27 Ph.D. students. Finally, Hubert Hilbi has delivered more than 170 talks at conferences and academic institutions.

Hubert Hilbi is a member of several microbiological societies, including the Swiss Society for Microbiology (since 2003), where he has been member of the steering committee since 2015, and the coordinator of the section Molecular Microbiology since 2018. In this function, he served as a program committee member for several annual SSM meetings and as the chair of the organizing committee of the annual meeting in Zürich in 2019. He also co-organized the Rigi Workshop 2022 “Cell Biology of Infection”, the 2<sup>nd</sup> D-A-CH *Dityostelium* Workshop, and the 10<sup>th</sup> International Conference on *Legionella* taking place this year in Yokohama, Japan.

Hubert Hilbi’s vision for the SSM is a tight integration and intense exchange among the five different scientific sections of the society. This is facilitated by his broad research interests, comprising bacterial genetics and biochemistry, quorum sensing and bacterial interactions with environmental amoebae, as well as bacterial virulence and cell biology of infection. Moreover, of great importance to him is the promotion of young scientists and to increase the visibility and impact of the SSM on a national and international level through lay communication and through the exchange with other professional organizations devoted to Microbiology in all its fascinating facets.

## Invitation to the General Assembly

All SSM members are cordially invited to attend the General Assembly of the Swiss Society for Microbiology (SSM) that will take place

**On Tuesday 30<sup>th</sup> of August 2022 from 5:45 PM to 6:45 PM**

### Agenda:

1. Review of the agenda
2. Approval of Annual Assembly Minutes
3. Approval of 2021 Accounts and report by auditors
4. Discussion of 2022 budget
5. Approval of 2023 budget
6. Approval of 2022 commission reports:
  - Molecular Microbiology
  - Clinical Microbiology
  - Virology
  - Mycology
  - Environmental Microbiology
  - Lay Communication
  - Early career
7. New members of committee
8. New members
9. Grants
10. Website
11. SSM Annual Meeting 2023
12. SSM Annual Meeting 2024
13. Other / varia / news

**\* IMPORTANT: Kindly send your inquiries by mail to the president via our general secretary ([secretary@swissmicrobiology.ch](mailto:secretary@swissmicrobiology.ch)) before the 6<sup>th</sup> of August 2022.**



# 1. SSM Income statement 2021 vs. 2020



	2021	2020
<b>INCOME (I)</b>	<b>37,431.43</b>	<b>52,497.12</b>
Membership fees income	34,431.43	37,495.65
SCNAT Support	-	15,000.00
Sponsoring	3,000.00	-
Interest Incomes	-	1.47
<b>EXPENSES (II)</b>	<b>42,488.33</b>	<b>44,957.25</b>
<b>OPERATIONAL EXPENSES</b>	<b>-</b>	<b>-</b>
Satellite Symposium	-	-
SCNAT Contribution	-	-
<b>PERSONNEL EXPENSES</b>	<b>25,156.12</b>	<b>32,465.83</b>
Net Salary	18,673.07	24,140.18
Social Charges	6,483.05	8,325.65
<b>OTHERS EXPENSES</b>	<b>17,332.21</b>	<b>12,491.42</b>
Course, Workshop, Symposium	-	-
Travel, Commissions expenses	2,000.00	1,129.30
Committee Members Expenses	790.30	48.80
SSM communication	-	-
Support contribution and SSM award	4,500.00	-
SSM Deficit Guaranty	-	-
Travel grants	1,500.00	1,500.00
Subscription Fees to pay	6,553.86	6,883.07
Office Supplies, Computer and IT Equipment	194.50	89.45
Web Site Fees	904.70	1,747.70
Postal Charges	10.00	112.50
Postfinance and Bank Charges	92.30	77.60
Others Expenses	186.55	253.00
Financial Expenses	-	-
Fiduciary Fees	600.00	650.00
Audit Fees	-	-
<b>A - Operating result (I-II)</b>	<b>(5,056.90)</b>	<b>7,539.87</b>
<b>B - Annual Meeting Benefit</b>	<b>-</b>	<b>-</b>
<b>B - Annual Meeting Deficit</b>	<b>(45,948.42)</b>	<b>(54,223.94)</b>
Annual Meeting Income	-	-
Annual Meeting Expenses	45,948.42	54,223.94
<b>C - Exceptional result</b>	<b>150.00</b>	<b>5,098.75</b>
Exceptional income	150.00	5,100.00
Exceptional Charge	-	1.25
Taxes	-	-
<b>TOTAL REVENUE</b>	<b>37,581.43</b>	<b>57,597.12</b>
<b>TOTAL EXPENSE</b>	<b>88,436.75</b>	<b>99,182.44</b>
<b>PROFIT</b>	<b>-</b>	<b>-</b>
<b>LOSS</b>	<b>(50,855.32)</b>	<b>(41,585.32)</b>



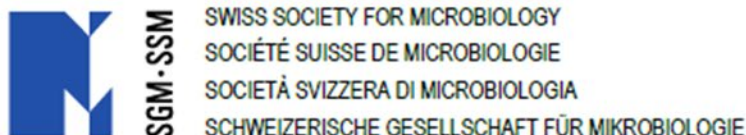
## 2. Balance sheet at 31.12.2021



As of 31.12.2021

	Fr.	Fr.
	31.12.2021	31.12.2020
<b>Assets</b>		
<b>Currents Assets</b>	<b>230,920.63</b>	<b>324,663.34</b>
- Cash	-	-
- Postal Current Account	100,938.53	124,663.34
- Postal Secondary Current Account	129,982.10	-
- Postal Account Saving	-	200,000.00
<b>Prepaid Expenses</b>	<b>35,113.85</b>	<b>638.20</b>
- Prepayments / Prepaid expenses	32,109.60	-
- Accrued Income	3,004.25	638.20
<b>Total Assets</b>	<b>266,034.48</b>	<b>325,301.54</b>
<b>Liabilities and Stockholder's equity</b>		
<b>Debts</b>	<b>12,109.20</b>	<b>12,109.20</b>
- Payable	-	-
- Dieter Haas Provision	12,109.20	12,109.20
<b>Accrued Expenses</b>	<b>1,642.83</b>	<b>10,054.57</b>
- Accrued Expenses	1,417.83	9,904.57
- Deferred revenue / Prepaid income	225.00	150.00
<b>Capital</b>	<b>252,282.45</b>	<b>303,137.77</b>
- Capital	303,137.77	344,723.09
- Period Profit/ Loss	(50,855.32)	(41,585.32)
<b>Total Liabilities and Stockholder's equity</b>	<b>266,034.48</b>	<b>325,301.54</b>

## 3. Report of the auditors



### Rapport des réviseurs des comptes relatifs aux comptes annuels de la Société Suisse de Microbiologie (SSM) à l'attention de l'assemblée générale de la SSM

Mesdames, Messieurs,

En notre qualité de réviseurs des comptes, nous avons contrôlé la comptabilité et les comptes annuels constitués des comptes de bilan et de pertes et profits de la SSM pour l'exercice se terminant au 31 décembre 2021.

La tenue de la comptabilité incombe au comité alors que notre fonction est de contrôler et d'évaluer cette dernière.

Compte tenu des examens effectués par sondages, nous confirmons que

- les soldes des comptes du bilan sont justifiés,
- les justificatifs correspondent à la comptabilité,
- la comptabilité est tenue avec soin et précision.

Le rapport des révisions établi par la fiduciaire Fidurev S.A à Assens, daté du 5 mai 2022, ci-annexé, conclu que les comptes annuels sont conformes aux dispositions du droit suisse et des statuts.

Les comptes annuels clôturent avec une perte de 50,855.32 CHF. Cela porte les actifs de la société de 303,137.77 CHF (2020) à 252,282.45 CHF (2021)

En conséquence, nous recommandons à l'assemblée d'accepter les comptes tels que présentés et d'en donner décharge au comité.

Dr. Robin Tecon Membre SSM

Dr. David Weissbrodt Membre SSM

Lausanne, 20 mai 2022

*Pièces jointes :*

- *Rapport des révisions établi par la fiduciaire Fidurev*
- *Bilan avec comparaison de l'année précédente*
- *Compte de résultat par rapport à l'année précédente*

## 4. Report of the fiduciary



Société Suisse de Microbiologie  
Champ-Pamont 12  
1033 Cheseaux

Assens, le 5 mai 2022

### Rapport de contrôle de la gestion des comptes de la Société Suisse de Microbiologie

Mesdames, Messieurs,

En notre qualité de vérificateurs des comptes de votre association et conformément au mandat que vous nous avez confié, ainsi qu'aux dispositions légales, nous avons vérifié les comptes annuels arrêtés au 31 décembre 2021.

Suite à nos contrôles, nous avons constaté les faits suivants :

1. Le bilan et le compte de pertes et profits établis concordent avec la comptabilité.
2. Les comptes pour l'année 2021 sont tenus de manière exacte.
3. L'état de la fortune sociale et des résultats répond aux règles établies par la loi et les statuts pour les évaluations en matière de bilan.
4. Les liquidités sont placées avec toute la prudence que la situation économique actuelle exige.

Selon notre appréciation, nous vous proposons d'approuver les comptes qui vous sont soumis.

Ceux-ci font ressortir une perte de **CHF 50'855.32**, que nous vous proposons de virer au compte de profits et pertes.

Dès lors, nous vous recommandons également d'approuver cette proposition et de donner décharge au Trésorier pour la comptabilité 2021.

Fidurev S.A.

  
Jean-Luc Dondénaz  
Agent Fiduciaire Breveté


  
Nicolas Despont  
Expert-comptable diplômé

Annexe : compte de profits et pertes 2021


Fidurev SA · Route St-Germain 17 · 1042 Assens · 021 886 31 20 · info@fidurev.ch · www.fidurev.ch · CHE-112.453.745 TVA

 Membre d'EXPERTsuisse


## 5. SSM Budget 2021

 SGM-SSM	2021
<b>INCOME (I)</b>	<b>37,000.00</b>
Membership fees income	37,000.00
SCNAT Support	
Sponsoring	
Interest Incomes	
Annual Meeting Benefit	
<b>EXPENSES (II)</b>	<b>88,600.00</b>
<b>OPERATIONAL EXPENSES</b>	<b>-</b>
Annual Meeting Organisation	
Annual Meeting Deficit	
Satellite Symposium	
SCNAT Contribution	
<b>PERSONNEL EXPENSES</b>	<b>35,000.00</b>
Net Salary	26,000.00
Social Charges	9,000.00
<b>OTHERS EXPENSES</b>	<b>53,600.00</b>
Course, Workshop, Symposium	
Travel, Commissions expenses	4,000.00
Committee Member Fees	3,800.00
SSM communication	5,000.00
Support contribution and SSM award	11,000.00
SSM Deficit Guaranty	10,000.00
Travel grants	9,000.00
Subscription Fees to pay	7,500.00
Office Supplies, Computer and IT Equipment	300.00
Web Site Fees	1,500.00
Postal Charges	50.00
Postfinance and Bank Charges	100.00
Others Expenses	500.00
Financial Expenses	
Fiduciary Fees	600.00
Audit Fees	250.00
<b>A - Operating result (I-II)</b>	<b>(51,600.00)</b>
<b>C - Exceptional result (V-VI)</b>	<b>-</b>
Exceptional income (V)	
Exceptional Charge (VI)	
Taxes	
<b>TOTAL REVENUE</b>	<b>37,000.00</b>
<b>TOTAL EXPENSE</b>	<b>88,600.00</b>
<b>PROFIT</b>	<b>-</b>
<b>LOSS</b>	<b>(51,600.00)</b>

## 6. SSM Budget 2022

 SSM	2022
<b>INCOME (I)</b>	<b>35,000.00</b>
Membership fees income	35,000.00
SCNAT Support	
Sponsoring	
Interest Incomes	
Annual Meeting Benefit	
<b>EXPENSES (II)</b>	<b>85,650.00</b>
<b>OPERATIONAL EXPENSES</b>	<b>-</b>
Annual Meeting Organisation	
Annual Meeting Deficit	
Satellite Symposium	
SCNAT Contribution	
<b>PERSONNEL EXPENSES</b>	<b>35,000.00</b>
Net Salary	26,000.00
Social Charges	9,000.00
<b>OTHERS EXPENSES</b>	<b>50,650.00</b>
Course, Workshop, Symposium	
Travel, Commissions expenses	3,000.00
Committee Member Fees	2,500.00
SSM communication	5,000.00
Support contribution and SSM award	11,000.00
SSM Deficit Guaranty	10,000.00
Travel grants	9,000.00
Subscription Fees to pay	7,000.00
Office Supplies, Computer and IT Equipment	150.00
Web Site Fees	1,500.00
Postal Charges	50.00
Postfinance and Bank Charges	100.00
Others Expenses	500.00
Financial Expenses	
Fiduciary Fees	600.00
Audit Fees	250.00
<b>A - Operating result (I-II)</b>	<b>(50,650.00)</b>
<b>C - Exceptional result (V-VI)</b>	<b>-</b>
Exceptional income (V)	
Exceptional Charge (VI)	
Taxes	
<b>TOTAL REVENUE</b>	<b>35,000.00</b>
<b>TOTAL EXPENSE</b>	<b>85,650.00</b>
<b>PROFIT</b>	<b>-</b>
<b>LOSS</b>	<b>(50,650.00)</b>

## 7. SSM Budget 2023

 SSM-SSM	2023
<b>INCOME (I)</b>	<b>38,000.00</b>
Membership fees income	35,000.00
SCNAT Support	
Sponsoring	3,000.00
Interest Incomes	
Other Income	
<b>EXPENSES (II)</b>	<b>81,350.00</b>
<b>OPERATIONAL EXPENSES</b>	<b>-</b>
Satellite Symposium	
SCNAT Contribution	
<b>PERSONNEL EXPENSES</b>	<b>25,000.00</b>
Net Salary	18,500.00
Social Charges	6,500.00
<b>OTHERS EXPENSES</b>	<b>56,350.00</b>
Course, Workshop, Symposium	
Travel, Commissions expenses	3,000.00
Committee Members Expenses	2,500.00
SSM communication	5,000.00
Support contribution and SSM award	15,700.00
SSM Deficit Guaranty	10,000.00
Travel grants	9,000.00
Subscription Fees to pay	6,500.00
Office Supplies, Computer and IT Equipement	2,150.00
Web Site Fees	1,000.00
Postal Charges	50.00
Postfinance and Bank Charges	100.00
Others Expenses	500.00
Financial Expenses	
Fiduciary Fees	600.00
Audit Fees	250.00
<b>A - Operating result (I-II)</b>	<b>(43,350.00)</b>
<b>B - Annual Meeting Benefit</b>	<b>-</b>
<b>B - Annual Meeting Deficit</b>	<b>-</b>
Annual Meeting Income	
Annual Meeting Expenses	
<b>C - Exceptional result (V-VI)</b>	<b>-</b>
Exceptional income (V)	
Exceptional Charge (VI)	
Taxes	
<b>TOTAL REVENUE</b>	<b>38,000.00</b>
<b>TOTAL EXPENSE</b>	<b>81,350.00</b>
<b>PROFIT</b>	<b>-</b>
<b>LOSS</b>	<b>(43,350.00)</b>




# SECTIONS REPORTS

# Molecular Microbiology Section Report

By Prof. Hubert Hilbi



## Commission members:



Hubert Hilbi (Zürich)  
Jörg Jores (Bern)  
Martin Pilhofer (Zürich)  
Patrick Viollier (Geneva)  
Jan-Willem Veening (Lausanne)

The main activity of the section Molecular Microbiology in the third year of the COVID-19 pandemic was the organization of the Rigi Workshop “Cell Biology of Infection”.

Postponed from January 2021, the workshop finally took place from January 30th to February 1st 2022 at Hotel Rigi Kulm. The workshop was organized by Hubert Hilbi (SSM section Molecular Microbiology), Urs Greber (LS2, SSM section Virology) and Claudia Rutte (Swiss Academies of Sciences, SCNAT). Generously sponsored by the SCNAT with contributions from the SSM and the SNF, the workshop was a great success. 25 PhD, post-doctoral or master students from virtually all Swiss universities participated in the event, and the participants unanimously found that the workshop “met their expectations”, and “would recommend the workshop to colleagues”.

The Rigi Workshop 2022 comprised 9 keynote lectures delivered by outstanding scientists: Nikola Biller-Andorno (UZH, “Risks and opportunities for society and medicine in the times of pandemics”), Carmen Buchrieser (Institute Pasteur Paris, “Legionella pneumophila”), Michael Way (Francis Crick Institute London, “Vaccinia virus” and “Publishing experiences – the editor’s view”), Melanie Blokesch (EPFL, “Vibrio cholerae”), Silke Stertz (UZH, “Influenza viruses”), Cyril Zipfel (UZH, “Concepts of innate immunity in plants and animals”), Yohei Yamauchi (University of Bristol, “RNA viruses”) and Roland Brosch (Institute Pasteur Paris, “Mycobacterium tuberculosis”). All student participants delivered a short talk and prepared a graphical abstract illustrating their research. In addition, the participants received beforehand some reading material on the topic “Legionella” or “Adenovirus”. During the workshop, this literature then served as the basis for a teamwork to prepare and present a research grant proposal. In the evening, Federico Germani and Nikola Biller-Andorno organized a game on the topic “misinformation”, and there were occasions to meet and discuss with the speakers.

Overall, the participants evaluated the workshop very favorably – given a rather dense program and given the restrictions due to the COVID-19 pandemic. The workshop was held in full compliance with the federal 2G+ rules (including an antigen rapid test at check-in) and, as a “pandemic perk”, all participants were accommodated in single rooms. The only downside of the workshop was the inhospitable, foggy, and cold weather, which maximally contrasted the very professional and friendly services of the Hotel Rigi Kulm.

*Hubert Hilbi, Zürich, May 2022*



# Clinical Microbiology Section Report

By Prof. Adrian Egli



## Commission members:

André Burnens (Zollikofen )

Alexis Dumoulin (Sion)

Adrian Egli (coordinator Universitätsspital Basel)

Hans Fankhauser (Kantonsspital, Aarau)

Gilbert Greub (CHUV, Lausanne)

Meri Gorgievski (Bern)

Eric Grüter (Swissmedic, Bern)

Katia Jatou-Ogay (CHUV, Lausanne)

Nadia Liassine (Dianalabs, Genève)

Reto Lienhard (La-Chaux-de-Fonds)

Gladys Martinetti (EOLAB, Bellinzona)

Beatrice Nickel (STPH)

Martin Risch (Imz Dr Risch, Bern)

Jacques Schrenzel (HUG, Genève)

Marie-Lise Tritten (ADMED, La Chaux-de-Fonds)

Andrea Zbinden (IMM, Zürich),

Reinhard Zbinden (IMM, Zürich)

During the past twelve months, the committee met only remotely due to the pandemic. We remain very active and productive in several levels and matters for the Swiss Society of Microbiology and our diagnostic microbiological community.

**Retreat to reorganize ourselves.** Based on a two-stage online retreat, our commission discussed how to (re)-structure and optimize the "Coordination Commission for Clinical Microbiology" for the present and future challenges. We **defined our aims and priorities** for the next two years. This includes: (i) our aim to interact more actively with federal offices, in particular the Federal Office of Public Health (FOPH) and Swissmedic and thereby highlight our advising role on microbiological diagnostic matters during the most severe public health crisis of the past 100 years; (ii) our dedication to further educate and trainee our residence, fellows and ourselves. Beside guidelines for experts in particular fields, we also decided to re-initiate an educational program – the planning phase was in 2021 and the program will start in Summer 2022; (iii) provide guidance on diagnostic matters including e.g. panel PCRs, quality controls for SARS-CoV-2 sequencing etc. (see publication list); and (iv) to meet on a more regular, monthly basis in order to be more flexible for changes during the pandemic.

The more frequent meetings allowed us to react significantly faster to political and diagnostic challenges during the SARS-CoV-2 pandemic.

The committee **warmly thanks Dr. Meri Gorgievski-Hrisoho** (Bern), **Marie-Lise Tritten-Arber** (ADMED, La Chaux-de-Fonds), and **Prof. Reinhard Zbinden** (IMM, Zürich) for their great service and valuable discussions and contribution to our section, the diagnostic field and our microbiology society. The committee also **welcomed new members in 2021**: Alexis Dumoulin, who will provide expertise in molecular diagnostics, and Beatrice Nickel (STPH) who will bridge to the Swiss Society for Parasitology.

Again the year 2021 was strongly dominated due to the **SARS-CoV-2 pandemic**. In particular, the alpha, delta and omicron Variants-of-Concern (VOCs) caused a massive workload and pressure for the diagnostic laboratories which challenges the workflows, personnel, and logistics.

The logistical delays due to shortage of reagents and consumables such as pipetting tips was an increasing problem. Clearly, we see a demand for a federal organized and coordinated safety storage facility, which should be build and maintained.

Beside the regular, monthly CCCM meetings, we also formed a smaller interaction group with Reto Lienhard, Prof. Gilbert Greub, and Prof. Adrian Egli with meetings almost every or every second week. We maintained the good interactions with the Federal Office of Public Health (FOPH) and were able to offer and provide our diagnostic expertise in many of the testing strategies using rapid antigen and PCR testing. The FOPH contacted us on a regular basis to discuss diagnostic aspects.

The website of the CCCM was used to also share important SARS-CoV-2 related documents<sup>1</sup>. Large and important conference for our community were canceled or postponed e.g. ECCMID and the annual SSM meeting.

Submission of various **scientific publication and recommendations from the CCCM**. We have published several recommendations on SARS-CoV-2 diagnostics covering the indication, usage and analytical performance of antigen, antibody, and PCR testing. In particular, we have published the results of our antigen validation project<sup>2</sup>, the results of the first External Quality Assessment for SARS-CoV-2 genome sequencing<sup>3</sup>, the early dynamic of the spread of the alpha variant in Switzerland<sup>4</sup>, and early recommendation on the omicron variant of concern and functionalities of PCR diagnostics<sup>5</sup>. In terms of sequencing the CCCM informed its members regularly about the SARS-CoV-2 surveillance efforts coordinated by the FOPH and the CRIVE.

**TransAL II** (the second part of the revision of laboratory testing) is now in phase 2, i.e. the review of the current analyses as well as their reimbursement. We have sent a statement of our position to the BAG in early 2020. The sudden tarif reduction initiated by the FOPH was irritating and for further steps, we participate with the FAMH and other diagnostic societies on a regular exchange regarding the diagnostic cost structure. We hope for our society, that we can maintain the current cost structure, which is very well justified regarding the strategic and operational value of an efficient microbiological diagnostics during the ongoing public health crisis.

**The Swiss Antibiogram Committee:** The 19th SAC meeting took place in January 2022. Most labs have introduced the EUCAST guidelines in 2020 and 2021. Due to the pandemic there was a delay in 2020.

- 1) <https://www.swissmicrobiology.ch/sections/clinical-microbiology/downloads>
- 2) <https://pubmed.ncbi.nlm.nih.gov/34946190/>
- 3) <https://pubmed.ncbi.nlm.nih.gov/34757834/>
- 4) <https://pubmed.ncbi.nlm.nih.gov/33806013/>
- 5) <https://pubmed.ncbi.nlm.nih.gov/34909869/>

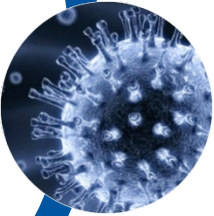
*Adrian Egli, Basel, June 2022*

# Virology Section Report

By Prof. Volker Thiel



## Commission members:



Angela Ciuffi (Lausanne)  
Cornel Fraefel (Zürich)  
Jerome Gouttenoire (Lausanne)  
Urs Greber (Zürich)  
Thomas Klimkait (Basel)

Karin Metzner (Zürich)  
Matthias Schweizer (Bern)  
Caroline Tapparel Vu (Geneva)  
Volker Thiel (Bern)

The past two years were certainly very special and challenging for all virologists and was heavily dominated by the COVID-19 pandemic. The Swiss virologists were of course involved in many local, kantonal and national activities and many of them served as members of the Swiss National COVID-19 Science Task Force. Several projects of SSM virologists were supported by the Special Call on COVID-19 of the SNF and within the framework of the COVID-19 National Research Program NRP78 (<https://www.nfp78.ch>), and in addition, many labs have been involved in scientific studies on SARS-CoV-2 and in establishing and maintaining SARS-CoV-2 diagnostics.

The annual SSM Meeting 2022 in Lausanne is now the first opportunity to meet again in person and we look very much forward to discuss science and virology in Lausanne. It is now finally also possible to organize the next Swiss-Virology meeting that is planned for 2023. The organizing committee comprised of Angela Ciuffi (University of Lausanne), Cornel Fraefel (University of Zurich), Jérôme Gouttenoire (University of Lausanne), Ben Hale (University of Zurich), Karin Metzner (University Hospital of Zurich), Daniel Pinschewer (University of Basel), Philippe Plattet (University of Bern), Mirco Schmolke (University of Geneva), Matthias Schweizer (University of Bern), Caroline Tapparel Vu (University of Geneva), Volker Thiel (University of Bern), Stefan Wieland (University of Basel) look forward to seeing you there. More information will be made available as soon as further details are known.

Volker Thiel, Bern, June 2022

# Mycology Section Report

By Dr. Alix Coste



## Commission members:

Saskia Bindschedler (Neuchâtel)  
Philipp Bosshard (Zürich)  
Alix Coste (Lausanne)  
Claudio De Virgilio (Fribourg)  
Jurg Enkerli (Zürich)

Markus Künzler (Zürich)  
Salome Leiboldgut-Landmann (Zürich)  
Arnaud Riat (Geneva)  
Dominique Sanglard (Lausanne).

During 2021, the committee of the section met twice virtually. The committee decided to keep in the future one virtual meeting around of April and a physical meeting during the General meeting.

On the 10th of January, for the first time SSM was associated to the meeting. Alix Coste attended the meeting, and was introduced as a "representative of SSM", which is a good first step for future collaboration.

We also continue to update our Swiss mycology database, always downloadable from the section webpage <https://www.swissmicrobiology.ch/en/sections/mycology>.

We renewed our affiliation to ISHAM, ECMM and we applied to become member of the International Mycological Association:  
<http://www.ima-mycology.org/society/member-mycological-organizations>.

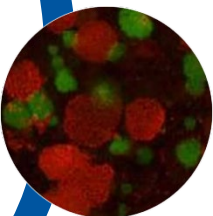
*Alix Coste, Lausanne, May 2022*

# Environmental Microbiology Section Report

By Dr. David Johnson



## Commission members:



Helmut Bürgmann (Kastanienbaum)  
Leo Eberl (Zürich)  
Christof Holliger (Lausanne)  
David R. Johnson (Dübendorf)  
Pilar Junier (Neuchâtel)  
Sara Mitri (Lausanne)  
Anita Narwani (Dübendorf)

Mauro Tonolla (Bellinzona)  
Jan Roelof van der Meer (Lausanne)  
Julia Vorholt (Zürich)  
David Weissbrodt (Delft)  
Franco Widmer (Zürich)  
Jakob Zopfi (Basel)

The Environmental Microbiology section brings together experts interested in how microorganisms interact with other organisms and with their environment. Our scope is broad and includes all microorganisms and habitats, ranging from those residing in waters and soils, on and within hosts, and in engineered systems. Our scope also includes applied aspects, such as how to manipulate and control microbial systems to achieve desired outcomes.

Of particular relevance to our section members is that the International Symposium on Microbial Ecology (ISME) will take place in Lausanne, Switzerland on 14-19 of August. ISME is the largest scientific meeting on microbial ecology in the world and showcases cutting edge research, attracts high-profile speakers, and is attended by microbial ecologists from across the globe. Many of our members are serving on ISME organizational committees and/or will be speaking at the conference. Of particular note is that the conference will include an event entitled "Discover the Microverse" that will be open to the public. The event will consist of a microbial art exhibit and include seminars geared to a lay audience. Everyone is welcome!

On behalf of the commission of Environmental Microbiology and the SSM, I would like to thank all members of the SSM community and the many individuals that contributed to our work.

David Johnson, Dübendorf, May 2022

# Lay Communication Section Report

By Prof. Gilbert Greub



## Commission members:

Alix Coste (Lausanne)  
Gilbert Greub (Lausanne)  
David R. JOHNSON ( Dübendorf)  
Pilar Junier (Neuchâtel)  
Carole Kebbi-Beghdadi (Lausanne)  
Hanna Marti (Zürich)

Shawna McCallin (Lausanne)  
Karl Perron (Geneva)  
Jacques Schrenzel (Geneva)  
Florian Tagini (Lausanne)  
Volker Thiel (Bern)  
Philip V'kovski (Bern)

Lay communication is important. This was nicely demonstrated during the SARS-CoV-2 pandemics where the impact of science communication on the adherence to PCR testing and/or to vaccination was clearly impacted by the quality of the communication. These pandemics also showed that (i) science communication needs specific skills and that (ii) some very good microbiologists and epidemiologists clearly failed this communication task with major impact on their credibility (and also partly on the credibility of scientifics).

Therefore, it is very important that the lay communication of the SSM continue to fulfill its objectives:

- (i) to increase public awareness about microbes and microbiology
- (ii) to disseminate the research done by Swiss Labs in the field of Microbiology to lay people
- (iii) to foster a wider engagement of microbiologist in Switzerland in lay communication
- (iv) to strengthen the connections between Swiss microbiologists and other Lay communication organisations operating in the field of science communication

The main recent activities of the lay communication section (from 1st January 2021) of the LCC-SSM or its members are listed below:

1. In close collaboration with the Coordinated Commission of Clinical Microbiology (CCCM SSM), the web page on frequently asked questions (FAQ), prepared in 2020 thank to the energy and guidance of Prof A Egli, has been further improved: <https://www.swissmicrobiology.ch/en/faqs>

This webpage dedicated to lay persons is today mainly focused on virology and SARS-COV-2, given the pandemic setting. However, it is planned to progressively extend this FAQ to other fields of microbiology.

2. Thus, in 2022, we aim at also develop further this FAQ page regarding monkeypox, which is a significant new outbreak that up to 30 June 2022 recorded about 100 cases in Switzerland.

3. The SSM website was re-designed in 2020 and 2021 in order to have a part of the SSM website dedicated to lay communication and lay persons. This work nevertheless was slowed down by the COVID pandemics and still a large amount of work is pending.

4. The CUSO course on "lay communication" co-organized by Pilar Junier (SSM president) and G Greub (chair of the LCC-SSM) has been postponed to autumn 2022, due to the waves of the SARS-CoV-2 outbreak in 2021.

5. Florian Tagini, member of the LCC-SSM, is since 2020 in charge of developing the social media communication, and really started in 2021. He is doing this with all interested members. Today, this is mainly done in collaboration with the CCCM-SSM section led by Adrian Egli & with the "Early career commission" chaired by Dr Tagini, as well of course with the lay communication section.

6. A website that will help teaching the microbiology to medical students has been prepared in autumn 2021 and spring 2022 by two members of the LCC-SSM (A Coste & G Greub) in close collaboration with the University of Bruxelles (O vandenbergh & M Hallin), thanks to a dedicated grant from the University of Lausanne and the University of Bruxelles: [www.krobspro.ch](http://www.krobspro.ch)

7. A new game on microbes called "MyKrobs" has been prepared by the chair of the Lay communication section in order to better communicate with the lay persons, but also to be used at secondary & tertiary-level schools in order to promote the future career in science and more specifically in microbiology of teenagers. This card game includes as many as 44 microbes, including the Coronavirus ([www.mykrobs.ch](http://www.mykrobs.ch)). Its distribution started in autumn 2021.

8. Several stories for children are currently being prepared by several members of the SSM (H Hilbi, V Thiel, P Junier, G Greub), that might get published at some point in a single book for children. This project is mainly led by Pilar Junier.

9. Pilar Junier and Saskia Bindschedler have lead a project using "students as teachers" that promotes microbiology both at school at the secondary and tertiary-level

10. Massimo Caine, a past member of the lay communication section is now working at the Science Communication office of the University of Geneva and he just organized in June a science communication summer school with about 40 participants. Among other topics, the SARS-CoV-2 outbreak and the monkeypox epidemic have been discussed.

We hope to have more members joining the lay communication section and we hope that you will all participate to the lay communication session organized in Lausanne by Pilar Junier & G Greub during the next SSM meeting held from 30 August to 1st September 2022.

*Gilbert Greub, Lausanne, July 2022*

# “Early Career” Report

By Dr. Florian Tagini



The Early Career commission was very active this year and we met each month to discuss ideas and organize the various activities. We particularly thank Hanna Marti for her dedication.

*Looking forward to the Early Career sessions at the next Swiss Society for Microbiology meeting (August 30<sup>th</sup> to September 1<sup>st</sup>)!*

We are really glad to announce that two sessions will be dedicated to Early Career. The first one is “Microbiologists of Tomorrow”. Five inspiring speakers, representing very different fields – academic, clinical, industrial (start-up and large company) and scientific communication – agreed to come to share their career stories, give specific advice and discuss with young society members.

The second session will be a new format called the “Journal Club Challenge”. The concept is that PhD students select a recent key paper from their field. The challenge is to present it in 5 minutes in the most captivating way. Each talk will be followed by a short time of questions & answers to make it interactive. The award for the best presentation will be 300 CHF.

*Increasing the accessibility to the European Society for Clinical Microbiology and Infectious Diseases (ESCMID) activities for trainees.*

Many clinical microbiologists in training are not aware of the activities that are organized by the ESCMID. These are usually great opportunities at improving particular set of skills. To tackle this issue, we plan on developing a Swiss network for clinical microbiologists in training who are willing to receive the updates about the trainee activities (mainly summer schools).

Please also feel free to share any thoughts, ideas or projects you may have for the society. If you are a young member willing to participate to the organization of the society's activities, contact us as well!

Finally, we kindly invite all the members to follow our accounts @SwissMicrobe on Twitter and #SSM on LinkedIn.

*Florian Tagini, Lausanne, June 2022*





The SSM offers a wide range of benefits to its members:



## Scientific Information and Networking

- Annual meeting
- Newsletter, Social media
- Advantages of affiliated societies (see list page 41)



## Financial Support

### - Travel Grants

The SSM provides travel grants for young member scientists.

### - Meeting Grants

The SSM supports the organisation of scientific meetings.

To know more about the rules, please go to <https://www.swissmicrobiology.ch/society/grants>



## Awards:

- **SSM Encouragement Award** is given to young investigators in the field of microbiology for achievements that are outstanding in terms of their originality and of particular scientific value. Achievements in the field of teaching as well as research and development are taken into consideration as well. The Award is given for a work that has been carried out in Switzerland or that is closely connected with our country.

- **Best Oral Presentation:** 5 Awards (one per section) in the context of the annual meeting presentations.

- **Poster Award:** 3 Awards selected during the annual meeting

To know more about the rules, please go to <https://www.swissmicrobiology.ch/society/awards>



# TRAVEL GRANTS REPORTS 2021

The Swiss Society for Microbiology SGM-SSM can provide funding for activities related to the dissemination of scientific results by its members. To know more about the rules, please go to <https://www.swissmicrobiology.ch/society/grants>.

In 2021, the SSM provided one travel grant to **Enea Maffei** to attend Determination of essential host factors for phage infection of dormant *P. aeruginosa* research in Copenhagen University, 9.8.2021 – 18.09.2021. You can read the report in the coming page.

Due to COVID 19, no other requests were received as many events were cancelled, postponed or went virtual.

## TRAVEL GRANT REPORT

Determination of essential host factors for phage infection of dormant *P. aeruginosa*

Copenhagen University, 9.8.2021 – 18.09.2021

Molecular microbiology

Author of report	Enea, Maffei	Affiliation of author	Biozentrum, University of Basel
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Moving to Copenhagen for six weeks to work in the laboratory of Prof. Lars H. Hansen proved to be an interesting experience under many aspects. Replicating the experiments developed during my PhD in another country with different infrastructure and work environment proved to be an entirely new challenge on its own. Once all the technical issues were solved, most of my internship had already passed and finishing my experiments in time was not easy but I made it. It was my goal to identify novel host genes essential for phage infection under non-conventional laboratory conditions via a Tn-Seq experiment. These genes can be identified by comparing the Tn-insertions of cells that survived the experiment under conventional vs. non-conventional settings.

Despite not knowing yet if my experiments were successful, I would overall describe my Danish experience as successful. Moving to and fitting in in a different country can at times be tough, however, despite the short time, I managed to build a network at the institute and get to know and live the Danish life from within. I learned many new things about science, my work and most importantly about myself and my future. My time in Denmark is over but the memories will be long lasting. I would like to thank all the collaborators involved that made my internship possible and most importantly the SSM for providing financial support.



Discussions to design and troubleshoot experiments were frequent.




With colleagues, we participated in the "DHL Stafeten", one of the world's largest amateur running events.



# MEMBERS & AFFILIATIONS

# Current List of Honorary Members

By alphabetical order

- 
- Prof. Dr. Michel ARAGNO
  - Prof. Dr. Werner ARBER
  - Prof. Dr. Reinhard BACHOFEN
  - Prof. Dr. Méd. Jacques BILLE
  - Prof. Dr. Gabriela PFYFFER VON ALTISHOFEN
  - Prof. Dr. Jean-Claude PIFFARETTI
  - Prof. Dr. Linda THOENY-MEYER
  - Prof. Dr. Méd. Alexander VON GRAEVENITZ

# New ordinary members in 2021

## By alphabetical order

In 2021, there were 37 new SSM members, among which 18 new students.

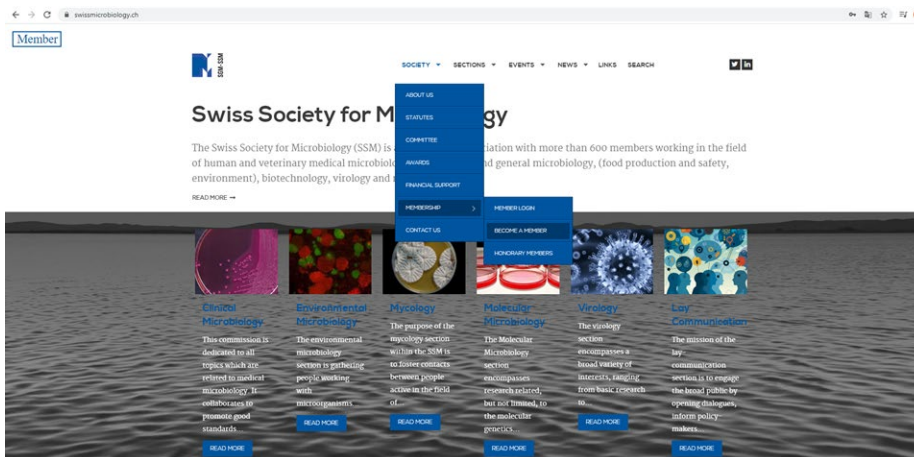
LAST NAME	FIRST NAME	INSTITUT
ARNOLDINI	Markus	ETH Zürich
AUBRY	Christèle	UNIL
BREGNARD	Danaé	Université de Neuchâtel
BUFFI	Matteo	University of Neuchâtel
CAGNO	Valeria	CHUV-Institute of Microbiology
CORAL	Marine	Promed Lab
CORONA RAMIREZ	Andrea	University of Neuchatel
CRAVERO	Melissa	University of Neuchâtel
CREMERS	Amelieke	UNIL
DAUPHIN	BENJAMIN	Eidg. Forschungsanstalt WSL
DELAVY	Margot	Institut Pasteur- Paris
ESTOPPEY	Aislinn	University of Neuchâtel
FATTON	Mathilda	University of Neuchâtel
FLUEKIGER	Ella	EAWAG
GOSELIN	Ophélie	UNIL
Hadji-Petrusheva Meloska	Ivanka	Meloski Consulting
HARTL	Johannes	Charité - Universitätsmedizin Berlin
KUHN	Thierry	University of Neuchatel
LAMOTH	Frederic	CHUV-Institute of Microbiology
LASSEN	Swenja	Balgrist University Hospital
MAIRPADY SHAMBAT	Srikanth	University Hospital Zürich
MARTIN	Sandra	UNIL
MATHEZ	Gregory	CHUV
MEIER	Caroline	CHUV
MEOLA	Marco	University Hospital Basel
MÜLLER	Dominik	Synlab SUISSE SA
NEUMEIER	Vera	University of Zurich
Pérez Rodríguez	Francisco Javier	Université de Genève
PRANGHOFER	Sigrid	Bioanalytica AG
PURUSHOTHAMAN	Srinithi	University of Basel
RAMONEDA	Josep	Eawag
ROGIVUE	Aude	Agroscope
ROLOFF HANDSCHIN	Tim	Universitätsspital Basel
SUNAGAWA	Shinichi	ETHZ
TINGUELY	Camille	Université de Neuchâtel
VOCAT	Anthony	CHUV-Institute of Microbiology
WEGNER	Fanny	University of Basel



# Membership Form



**New members:** become a member by filling the online form <https://www.swissmicrobiology.ch/en/society/membership/become-a-member>, make sure to fill all fields. A kind reminder, since 2021, there is a new category in the form: "Student".



## Join us!

### Application for membership

Membership  Student member CHF 35 p.y.  Ordinary member CHF 75 p.y.  
 Collective member CHF 300 p.y.

First Name

Middle Name

Last Name

Email

Second E-mail

Username

Password    
Your password will be sent to the above e-mail address.  
Once you have received your new password you can log in and change it.

Address

City

State/Region

Country

NPA

Department

Institution

Section  Molecular Microbiology  Environmental microbiology  Clinical microbiology  
 Mycology  Virology  Lay Communication

Academic qualifications / title

Obtained from:

Mobile

Business phone

Fax

Notes

Captcha  I'm not a robot

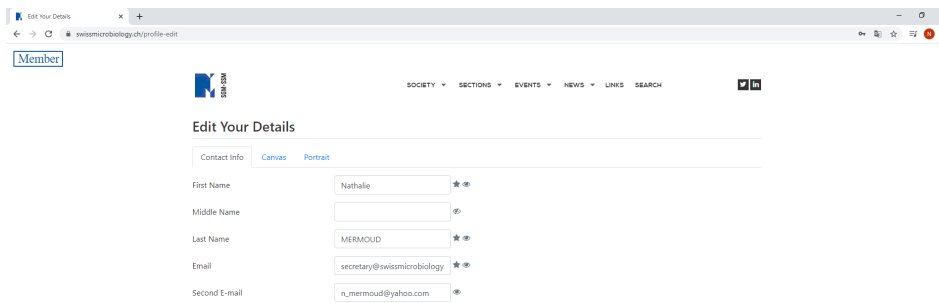
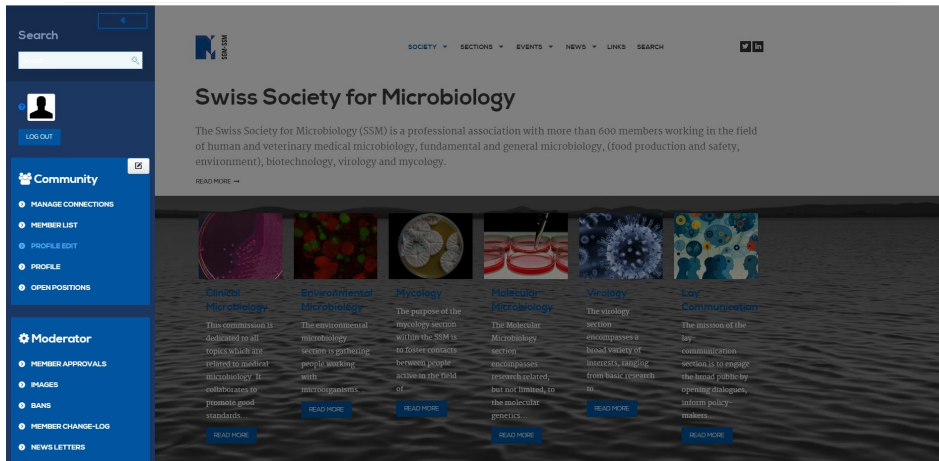
#### Instructions

According to Art. 6 of the Articles of Association the undersigned wishes to apply for membership to the SGM-SSM as:

- Student member CHF 35 p.y.
- Ordinary member CHF 75 p.y.
- Collective member CHF 300 p.y.

# Members Profile page

**Current members:** update your profile by logging in, select edit profile and update your info. You can also send a mail to [secretary@swissmicrobiology.ch](mailto:secretary@swissmicrobiology.ch)



# SSM Affiliations

The SSM is currently affiliated to the following societies (*by alphabetical order*). Our members can thus benefit of some advantages offered by these societies.



European Confederation of Medical Mycology

<https://www.ecmm.info>



European Federation of Biotechnology

<http://www.efbiotechnology.org>



European Society of Clinical Microbiology and Infectious Diseases

<https://www.escmid.org>



European Society for Virology

<http://www.eusv.eu>



Federation of European Microbiological Societies

<https://fems-microbiology.org>



International Society for Human and Animal Mycology

<https://www.isham.org>



European Union of Medical Specialists

<https://www.uems.eu>



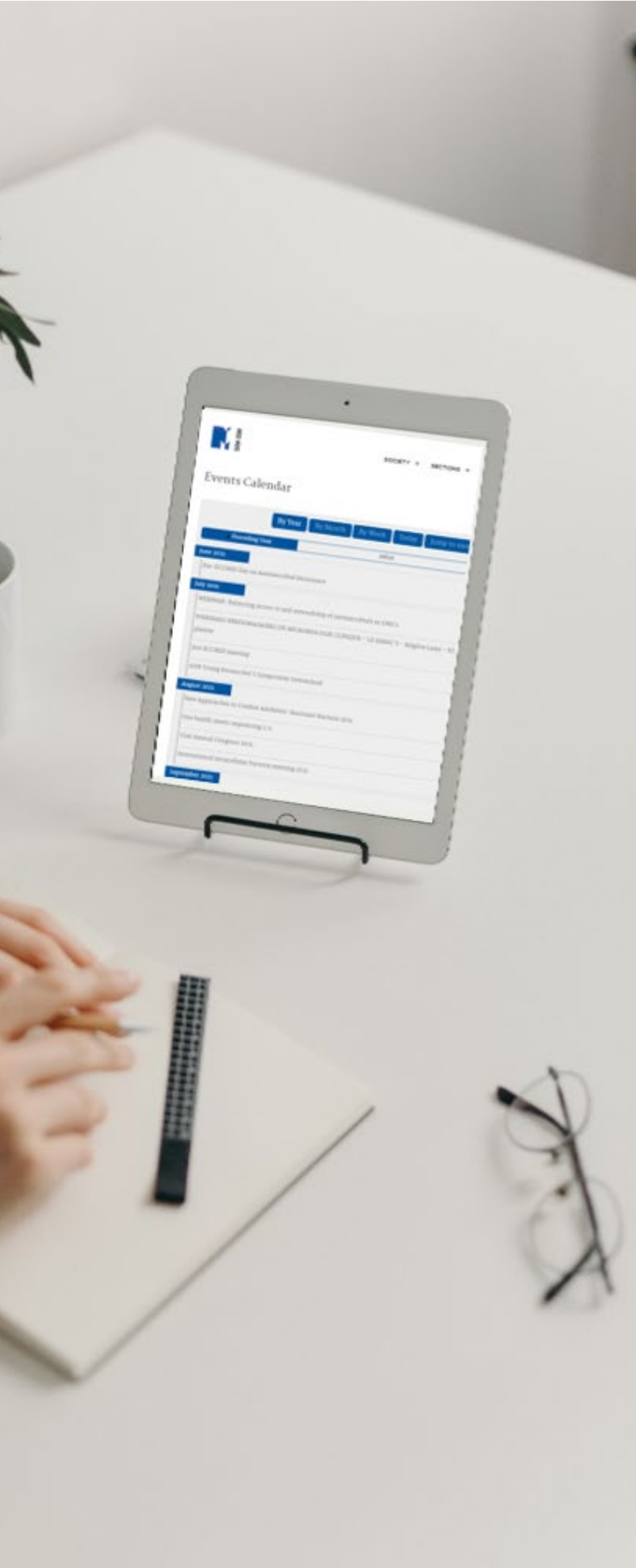
Swiss Academy of Sciences

<https://naturalsciences.ch>



Swiss Union of Laboratory Medicine

<https://www.sulm.ch>



# CALENDER OF UPCOMING EVENTS

The below events can be subject to change, so please check regularly our website event page and the related event page to view the latest updates. <https://www.swissmicrobiology.ch/events/year.listevents>

PLANNED 2022 EVENTS	
<b>July 2022</b>	
08 JUL	2nd Young Swiss Microbiologists Symposium
<b>Aug 2022</b>	
14 AUG - 19 AUG	18th International Symposium on Microbial Ecology (ISME 18)
23 AUG - 26 AUG	ESCCAR- International intracellular bacteria meeting 2022
<b>30 AUG – 01 SEPT</b>	<b>SSM Annual meeting 2022</b>
<b>SEPT 2022</b>	
05 SEPT - 07 SEPT	74th Annual Conference of the German Society for Hygiene and Microbiology e. V
06 SEPT - 07 SEPT	Anniversary Online Symposium on Bdellovibrio research
07 SEPT - 10 SEPT	24th Annual Conference of the ESCV
08 SEPT - 11 SEPT	SSAI & ICHS Joint Meeting 2022
08 SEPT - 11 SEPT	22nd ICHS International Symposium on Infections in the Immunocompromised Host
15 SEPT - 28 SEPT	8th European Conference on Prokaryotic and Fungal Genomics (ProkaGENOMICS)
<b>OCT 2022</b>	
20 OCT - 21 OCT	7th ICCMg Conference
PLANNED 2023 EVENTS	
29 JAN - 31 JAN	Rigi Workshop 2023
16 FEB - 17 FEB	LS2 Annual Meeting 2023
15 APR - 18 APR	33rd ECCMID
14 MAY – 18 MAY	XVth International Nidovirus Symposium
24 AUG - 27 AUG	16th IWOP meeting
<b>30 AUG – 31 AUG</b>	<b>SSM Annual meeting 2023-Lausanne</b>



SGM-SSM

SWISS SOCIETY FOR MICROBIOLOGY  
SOCIÉTÉ SUISSE DE MICROBIOLOGIE  
SOCIETÀ SVIZZERA DI MICROBIOLOGIA  
SCHWEIZERISCHE GESELLSCHAFT FÜR MIKROBIOLOGIE

“INFO” is the Official Annual Report of the Swiss Society for Microbiology.

It is sent to all SSM members once a year.



The current SSM annual report « INFO 70» has been prepared by:

Nathalie MERMOUD

General Secretary

Swiss Society for Microbiology

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We would like to thank SCNAT for their financial support

