

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

# SSM Annual Report 2017 INFO 65



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The Swiss Society for Microbiology (SSM) is a professional association with more than 700 members working in the field of human and veterinary medical microbiology, prokaryotic biology, environmental microbiology, virology and mycology.

www.swissmicrobiology.ch

Gilbert Greub, Prof. Dr. / President SGM SSM 2016-2018 / Head of Laboratory /Director of the microbiology Institute of the University of Lausanne, Bugnon 21, 1011 Lausanne, Switzerland gilbert.greub@chuv.ch

Nathalie Mermoud / General Secretary SGM SSM / (T) +41 (0) 78 842 18 07 secretary@swissmicrobiology.ch

## **SSM COMMITTEE**

#### Prof. Gilbert GREUB - MD-PhD

Directeur de l'institut de Microbiologie et Chef de Service Département des laboratoires Bureau IMU 02-222 Bugnon 48, CH-1011 LAUSANNE Tel: 021 314 49 79 Fax: 021 314 40 60 e-mail: gilbert.greub@chuv.ch

#### President 2016-2018



Prof. Pilar Junier University of Neuchâtel Rue Emile-Argand 11 2000 NEUCHÂTEL Tel: 032 718 22 44 e-mail: pilar.junier@unine.ch

#### Nathalie Mermoud

Route d'Yverdon 3, 1033 CHESEAUX-SUR-LAUSANNE Tel: 078 842 18 07 e-mail: <u>secretary@swissmicrobiology.ch</u>

## Future President 2019-2021



#### **General Secretary**



#### Treasurer till August 2017



Prof. Dr. med. André Burnens Synlanb Suisse SA Alpenquai 14 6005 LUZERN Tel : 041 544 58 65 e-mail : Andre.Burnens@synlab.com

> Treasurer starting August 2017 Environmental Microbiology Section till August 2017



Prof. Christof Holliger Epfl Enac IIE LBE CH C3 425 (Bâtiment CH) Station 6 CH-1015 LAUSANNE Tel: 021 693 47 24 Fax : 021 693 47 25 e-mail : christof.holliger@epfl.ch

### **Prof. Patrick Viollier**

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## Prof. Jacques Schrenzel

Laboratoire de Bactériologie Hôpitaux Universitaires de Genève (HUG) Rue Gabrielle-Perret-Gentil 4 CH-1211 GENEV 14 e-mail: Jacques.Schrenzel@hcuge.ch

#### Prokaryotic Biology Section



#### **Clinical Microbiology Section**



### Prof. Dr. Volker Thiel Institut für Virologie und Immunologie IVI Institut für Immunbiologie Länggass Strasse 122 CH-3001 Bern Tel: 031 631 24 13 e-mail: volker.thiel@vetsuisse.unibe.ch

## Prof. Dr. Dominique Sanglard Institut de Microbiologie CHUV Rue du Bugnon 48 CH-1011 Lausanne Tel. 021 314 40 83 Fax 021 314 40 60 e-mail: Dominique.Sanglard@chuv.ch

Dr. Karl Perron Sciences III / Université de Genève 30 quai Ernest-Ansermet CH – 1211 GENEVA 4 Tel. 022 379 31 27 e-mail: karl.perron@unige.ch Virology Section



#### Mycology Section



#### Lay Communication Section



## **WORD OF THE PRESIDENT**

Dear Members,

It is already July 2017 and in about 8 weeks we will have our Annual meeting in Basel. As usual, you receive the annual report (INFO). As you will see the layout of this INFO has completely changed being no more a printed booklet but an attached PDF. During years, Irène Müller edited this small INFO booklet that was initially always green color and more recently moved to blue, the color of our SSM-SGM logo. Therefore, naturally our new General Secretary, Nathalie Mermoud, who is acting



since 1<sup>st</sup> January 2017 for the SSM chose blue for the layout of this SSM news (the new name of the INFO).

Before discussing some administrative issues, I have to point out that this year our Swiss Society of Microbiology is celebrating 75 years since its creation. The society was founded in 1942, during these years it was quite impressive how microbiology developed. Microbiology developed so well that often new fields have been created, thus from bacteriology, which was initially the main discipline, emerged a large variety of disciplines including: biotechnology, molecular biology, chemotherapy as well as, a long time ago, immunology. Thus the challenge for us is ideally to house all this knowledge within the same society despite very different types of microbes and despite the many new technological aspects that emerge year after year.

It is to be noted that when I read certain documents located in the society's archives, I discovered that the first president of our society Paul HAUDUROY (Prof Dr. Méd. Institut d'Hygiène Université de Lausanne, 1897-1967) was working at the University of Lausanne.

And today what is the current achievement of Swiss microbiology? To answer that question, I have based the following lines on statistics that have been published in the journal "Lab Times" published this year on April issue. In that journal, an analysis of recent publications over 7 years' period shows that Switzerland is the 7<sup>th</sup> country in term of number of citations with a total of 65'213 citations in the field of microbiology. Given the relatively small size of our country, the number of articles produced during that time is of course much smaller than the "best country": Germany that has 8'528 articles and 232'218 citations. Thus Switzerland with 65'213 citations and about 2'075 articles had a much higher citation per article ratio than Germany (31.4 vs. 27.2). And interestingly, among the twenty best countries in term of citations, Switzerland is number 2 just after Scotland with 46'042 citations representing the first country in terms of number of citations per article (33.3). I should stress here that this publication analysis was performed from 2007 to 2013 and it is possible that Swiss researchers may have significantly improved since that time as compared to other countries given the strong funding difficulties faced by our European colleagues. Please note that when comparing the citation per article ratio of Switzerland (31.4) to other countries such as USA (29.3), China (13.2), Canada (25.1), Japan (16.3) or Australia (26.7), the Swiss production still appears to be one of the best when considering this ratio as a reflect of quality.

In the same article, the most cited authors are also provided and it is interesting to note that 2 of the 30 most cited authors are working in Switzerland: Patrice Nordmann and Laurent Poirel been

respectively classified as the 3rd and 8th position. Of course, many reflect current hot topics, that include anti-microbial resistance, metagenomics, and emerging pathogens.

Before concluding this editorial, I would just like to stress that the SSM activities not only include the Annual meetings that will take place in Basel in August 2017 and in Lausanne in August 2018, but also some specific sponsoring of meetings, which are advertised in the monthly newsletters, support to young researchers through travel grants, as well as support to researchers through the Awards that are given during the yearly Annual Assembly. Of course the 3 poster awards are not yet attributed and will be selected during the meeting but we already know who will get the encouragement SSM award: Mederic Diard, from Zurich, will receive the SSM encouragement award during the price ceremony at the end of the SSM annual meeting in Basel for his impressive work. And sure you will all be interested in discovering his area of research during the lecture that he will give during the price ceremony. Warm congratulations to Mederic.

Finally, I want to invite all of you to participate to the General Assembly that will take place on August 31 in Basel at 5PM. During the General Assembly a lot of important points will be discussed including news from each section, as well as the report from our treasurer. Do not miss this opportunity to interact with the SSM committee and to help us making our society living and moving forward.

I wish all of you a nice summer and hope to see you numerous in Basel.

With my best regards, Gilbert GREUB President SSM 2016 to 2018

# **NEW CANDIDATES FOR THE COMMITTEE**

Section	Current Head	New candidate to be elected
Lay communication (New section)	NA	Karl Perron
Mycology	Dominique Sanglard	Alix Coste
Environmental Microbiology	Christof Holliger	David Johnson
Function	Current Person	New candidate to be elected
Treasurer	André Burnens	Christof Holliger

# Candidate to be elected as "Head of Lay communication section": Karl Perron

Curriculum Vitae Karl Perron, PhD

Name, first name:	PERRON Karl
Date of birth:	27 March 1968
Nationality:	Swiss
Civil status:	Married, 2 children
Work address:	University of Geneva
	Dpt of Botanic and Plant Biology & School of Pharmaceutical Sciences
	Microbiology Unit
	Quai Ernest-Ansermet 30
	1211 Geneva 4
	Switzerland
	Phone +41 22 379 31 27
	Email karl.perron@unige.ch

## ACTIVITIES

- Group leader, "Chargé d'enseignement": Field of research: study of the co-resistance between trace-metals and antibiotics in *Pseudomonas aeruginosa* (www.perronlab.ch)
- **Responsibility for BiOutils:** Managing a university-secondary school interface (<u>www.bioutils.ch</u>)
- Coordinator of the CEBUG: Collaboration in the set-up of the Center of Excellence in Bacteriology (<u>www.cebug.ch</u>)
- **PAM director:** Setting up and managing the Microbiological Analytical Platform (PAM) of the University of Geneva. (PAM).

### MEMBERSHIPS

• **SSM** (Swiss Society for Microbiology), Scientific committee, Coordinator of the section "Lay Communication".

#### HONORS

- **Pfizer Price 2005** in fundamental infectiology.
- Science Communication Award 2011, First Price. ZMG (Swiss society for cell biology, molecular biology and genetics)

### PROFESSIONAL ACTIVITIES (post-grad)

- **2000-2001:** Post-doctorate. In collaboration with Exelixis Pharmaceutical Inc.: « Inducible expression system in *Chlamydomonas reinhardtii*». Laboratory of Professor J.-D. Rochaix. University of Geneva.
- **2001-2003:** Post-doctorate. « DksA, stringent response and virulence in *Pseudomonas aeruginosa* ». C. van Delden. CMU. Geneva.
- 2003-2006: Maître assistant. « DksA RNAP interaction during stringent response ». Laboratory of C. van Delden. CMU. Geneva.
- 2006-2007: Maître assistant. « Study of DnaJ in the phage RB43 ». Laboratory of Professor C. Georgopoulos, CMU, Geneva.
- 2007-2008: Maître assistant. « Use of group II intron (targetron) to disrupt ORFs in *Staphylococcus aureus* ». Professor P. Linder.
- Since 2007: Responsible of BiOutils. Responsible of a University-school interface for life sciences (<u>http://www.bioutils.ch</u>). UNIGE.
- 2008-2011: Scientific collaborator, group leader. « co-resistance between trace-metals and antibiotic in *Pseudomonas aeruginosa*» University of Geneva.
- Since 2011: Group leader, Chargé d'enseignement. Research on the opportunistic pathogen *Pseudomonas aeruginosa*.

Teaching of bacteriology (practical courses and lectures – 161 h per year).

**PUBLICATIONS (since 2014):** A complete list is available on the following link: <u>Researchgate</u>

- Ducret V, Gonzalez MR, Scrignari T, Perron K. OprD repression upon metal treatment requires the RNA chaperone Hfq in *Pseudomonas aeruginosa*. Genes. 3;7(10), 2016.
- Gonzalez MR, Fleuchot B, Lauciello L, Jafari P, Applegate LA, Raffoul W, Que Y-A, Perron K. Effect of Human Burn Wound Exudate on *Pseudomonas aeruginosa* Virulence. **mSphere.** 1(2):e00111-15, 2016
- Abdel-Sayed P, Kaeppeli A, Siriwardena T, Darbre T, Perron K, Jafari P, Reymond JL, Pioletti DP, Applegate LA. Anti-Microbial Dendrimers against Multidrug-Resistant *P. aeruginosa* Enhance the Angiogenic Effect of Biological Burn-wound Bandages.**Sci. Rep.** Feb. 2016
- Slepikas L, Chiriano G, Perozzo R, Tardy S, Kranjc-Pietrucci A, Patthey-Vuadens O, Ouertatani-Sakouhi H, Kicka S, Harrison C, Scrignari T, Perron K, Hilbi H, Soldati T, Cosson P, Tarasevicius E, Scapozza L. In silico driven design and synthesis of rhodanine derivatives as novel antibacterials targeting the enoyl reductase InhA.J. Med. Chem. Jan. 2016
- Caine M, Zuchuat S, Weber A, Ducret V, Linder P, Perron K. BiOutils: an interface to connect university laboratories with microbiology classes in schools. **FEMS Microbiol Lett.** Sept. 2015
- Caine M, Horié N, Zuchuat S, Weber A, Ducret V, Linder P, Perron K. A 3D-DNA Molecule Made of PlayMais. Science Activities. 2015 52:31-44
- Marguerettaz M, Dieppois G, Que Y-A, Ducret V, Zuchuat S, Perron K. Sputum containing zinc enhances carbapenem resistance, biofilm formation and virulence of *Pseudomonas aeruginosa*. **Microb Pathog**. 2014 77:36-41
- Deakin SP, Ducret V, Bioletto S, Perron K, James RW. Modulating reconstituted high density lipoprotein functionality to target the *Pseudomonas aeruginosa* quorum sensing system. Life Sci. 2014 112:68–73.

• Biloa Messi B, Ho R, Meli Lannang A, Cressend D, Perron K, Nkengfack AE, Carrupt PA, Hostettmann K, Cuendet M. Isolation and biological activity of compounds from Garcinia preussii. **Pharm Biol.** 2014 52:706-711.

## Candidate to be elected as "Head of Mycology section": Alix Coste

(9 and 7 y.o.)

Date of birth: July 28,1973

Nationality: French and Swiss

Marital status: married, two daughters

## Alix COSTE, PhD Doctor-Engineer in Life Sciences

Ch. des moulins 5, CH-1066 EPALINGES

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- 🗏 : alix.coste@chuv.ch
- 10000-0001-9481-9778

## **FORMATION**

#### **Academic Formation**

2017-2020	FAMH training in Microbiology, IMUL-CHUV, Lausanne
May 2013	Certificate of Advanced Studies (CAS) in Epidemiology and Clinical Research. Faculté de Biologie et Médecine (FBM), CHUV-UNIL, Lausanne.
Oct. 2000	PhD in Biology (with distinction and summa cum laude)
	"Protection de souriceaux contre les diarrhées à rotavirus par immunization nasale de leur mère avec des VLPs ou des salmonelles recombinantes". ISREC, Lausanne / Clermont-Ferrand University, France, under the supervision of the Pr. JP. Kraehenbühl, ISREC, Switzerland.
Sept. 1996	Master's Degree in Agronomic Engineering (Grade B)
	"La lysogénie chez les bactéries propioniques laitières". Opt. Sci. and Tech. in Animal Production, Applied Biochemistry and Genetics, Rennes I University /ENSAR, France. Under the supervision of the Pr. M. Gautier, Milk Technologies Laboratory, INRA, Rennes, France

#### **Animal Experimentation**

Since 2002 Habilitation to supervise animal experimentation in France and Switzerland

### PROFESSIONAL EXPERIENCE

#### Research

Since 2009	<b>Project manager</b> "Genome wide analysis of virulence factors regulators in the pathogenic yeast <i>C. albicans</i> ". Institute of Microbiology, University Hospital, Lausanne (IMUL), Switzerland. Responsibilities: Animal exp. supervisor, Team and budget management, oral and written communications, teaching, Ms and PhD students coaching, Technical staff coaching, symposiums organizer.
Dec. 2001 –	Post-doctoral position
March 2009	"Study of the signaling pathway controlling the upregulation of ABC-transporter genes in <i>C. albicans</i> ". IMUL, Switzerland under the supervision of the Pr. D. Sanglard.
	Responsibilities: Animal exp. supervisor, Team management, oral and written communications, teaching, Student coaching, meetings and symposiums organizer, administrative assistant.
Oct. 2000 –	Young scientist position
Dec. 2001	"Intestinal epithelial cell inflammatory response to STEC infection". Microbiology Laboratory, INRA Clermont-Ferrand, France under the supervision of the Dr. C. Martin. Responsibilities: Animal facility supervisor, Cell culture facility manager, oral and written communications
Teaching	
Since 2015	Courses for Bachelor in biology, module "From basics to clinics and back", FBM Lausanne (10h/year)
Since 2007	Practical courses for Bachelor in biology, module "Interactions Biotiques", FBM Lausanne (32h/year)
Since 2012	Tutor for the Master MLS course "how to write a grant Master MLS",
April 2012	Courses on Epidemiology of fungi diseases for Master MLS, FBM Lausanne (2h/year)
Since 2011	Courses on Antifungal resistance, DU of Medical Mycology, Paris Descartes (2h/year)
Since 2010	Courses on Microbial Pathogenesis, PhD tutorial (4h/year)
Management	
Since 2010	Organization of an annual day of formation on animal experimentation (RESAL)

#### 2008-2009 EURESFUN Coordinator Assistant, FP6 Specific Targeted Research Project

### **EDITORIAL BOARD**

Article ReviewEukaryotic cell; FEMS yeast research; Frontiers in microbiology; Journal of Medical Microbiology; Medical Mycology ;<br/>Mycoses; Scientific Reports; VirulenceProject ReviewPortuguese Foundation for Science and Technology (FCT) in 2012Academic EditorPlosOne

## **GRANTS AND AWARDS**

2013	Bourse Novartis pour la Recherche Bio-médicale (50.000CHF)
2012	Maria Heim-Vögtlin Program Research Grant of the FNRS for two years (200.332 CHF)
2009	"Bourse Pro-femme" of the FBM (Biology and Medicine Faculty) of Lausanne (100.000 CHF)
2007	"Young Investigator Award" for a workshop talk. FEBS advanced lecture Course "Human Fungal Pathogen" May 11-17, 2007 La Colle-sur-Loup, France (200 €) Didactic Poster Prize of the CHUV Research Day, February 1, 2007 (500 CHF)
2006	Awardees of the Swiss Society for Infectious Diseases. The GlaxoSmithKline AG grant (10.000 CHF) Poster Prize of the 16th congress of the ISHAM. Palais des Congrès de Paris. 25-29 June 2006 (500\$)
2005	Young Scientist Grant of the FBM (Biology and Medicine Faculty) of Lausanne (100.000 CHF)

### **LANGUAGES**

French: Mother tongue, English: Fluent, German and Italian: Conversational

### **REFERENCES**

Pr. D. Sanglard, Institut de Microbiologie, CHUV, rue du Bugnon 48, 1011 Lausanne, Switzerland ;

dominique.sanglard@chuv.ch Pr. G. Greub, Head of Institut de Microbiologie, CHUV, rue du Bugnon 48, 1011

Lausanne, Switzerland ; <u>gilbert.greub@chuv.ch</u> **Pr. A. Telenti**, Adjunct Professor, J. Craig Venter Institute, La Jolla, CA, USA, atelenti@jcvi.org

Pr. C. d'Enfert, Institut Pasteur, 25-28 rue du Dr. Roux, 75015 Paris, France ; denfert@pasteur.fr

### MAIN PUBLICATIONS

#### **Peer-reviewed articles:**

- Sarah Berger, Yassine El Chazli, Ambrin Farizah Babu, <u>Alix T. Coste</u>. Azole Resistance in Aspergillus fumigatus: A consequence of antifungal use in agriculture? Front Microbiol. 2017, In press
- Aude Pierrehumbert, Françoise Ischer, <u>Alix T. Coste</u>. Unexpected transcripts in Tn7 orf19.2646 *C. albicans* mutant lead to low fungal burden phenotype *in vivo*. Front Microbiol. 2017, In press
- Sara Amorim-Vaz, Van Du T. Tran, Sylvain Pradervand, Marco Pagni, <u>Alix T. Coste\*</u>, and Dominique Sanglard \*. RNA enrichment method for quantitative transcriptional analysis of pathogens *in vivo* applied to the fungus *Candida albicans*. MBio. 2015 Sep 22;6(5). pii: e00942-15. \* Contributed equally to this work.
- Eric Delarze, Françoise Ischer, Dominique Sanglard, <u>Alix T. Coste</u>. Adaptation of a *Gaussia princeps* Luciferase reporter system in *Candida* albicans for in vivo detection in the *Galleria mellonella* infection model. Virulence. 2015 Oct 3;6(7):684-93.
- Sara Amorim-Vaz, Eric Delarze, Françoise Ischer, Dominique Sanglard, <u>Alix T. Coste.</u> Examining the virulence of *Candida albicans* transcription factor mutants using *Galleria Mellonella* and mouse infection models. Front Microbiol. 2015 May 5;6:367.
- P. Vandeputte, F. Ischer, D. Sanglard, <u>A. T. Coste</u>. In vivo systematic analysis of C. albicans Zn2-Cys6 transcription factors mutants for mice organ colonization. Plos One, 2011;6(10):e26962.
- Gobert AP, <u>Coste A</u>, Guzman CA, Vareille M, Hindré T, de Sablet T, Girardeau JP, Martin C. Modulation of chemokine gene expression by Shigatoxin producing *Escherichia coli* belonging to various origins and serotypes. Microbes Infect. 2008 Feb;10(2):159-65.
- <u>Coste A. T.</u>, Semelcki A., Forche A., Berman J., Diogo D., Bougnoux M.E., D'Enfert C., Berman J. and Sanglard D. Genotypic evolution of drug resistance mechanisms in sequential *C. albicans* isolates. Eukaryot Cell. 2007 Oct;6(10):1889-904.
- <u>A.T. Coste</u>, V. Turner, F. Ischer, J. Morschhäuser, A. Forche, A. Selmecki, J. Berman, J. Bille and D. Sanglard. A mutation in Tac1p, a transcription factor regulating CDR1 and CDR2, is coupled with loss of heterozygosity at Chromosome 5 to mediate antifungal resistance in Candida albicans. Genetics, 2006 Apr ; 172(4) : 2139-56.
- A.T. Coste, M. Karababa, F. Ischer, J. Bille, D. Sanglard. TAC1 (Transcriptional Activator of CDR genes) is a new transcription factor involved in the regulation of the Candida albicans ABC-transporters CDR1 and CDR2. Eukaryot Cell. 2004 Dec;3(6):1639-52.
- F. Sierro, B. Dubois, <u>A. Coste</u>, D. Kaiserlian, J.-P. Kraehenbuhl, J.-C. Sirard. Flagellin stimulation of intestinal epithelial cells triggers CCL20mediated migration of dendritic cells. PNAS 2001 Nov 20; 98 (24) : 13722-7
- <u>A. Coste</u>, J. Cohen, M. Reinhardt, J.-P. Kraehenbuhl, J.-C. Sirard. Nasal immunisation with Salmonella typhimurium producing rotavirus VP2 and VP6 antigens stimulates specific antibody response in serum and milk but fails to protect offspring. Vaccine 2001 Jul 20; 19(30):4167-74.
- Hervé C., <u>Coste A.</u>, Rouault A., Fraslin J.-M., Gautier M., First evidence of lysogeny in *propionibacterium freudenreichii subsp. Shermanii*. Appl Environ Microbiol 2001 Jan; 67 (1): 231-8.
- <u>A. Coste</u>, J.-C. Sirard, K. Johansen, J. Cohen, J.-P. Kraehenbuhl. Nasal immunization of mice with virus-like particles protects offspring against rotaviral diarrhea. J Virol 2000 Oct; 74 (19): 8966-71.

#### **Reviews and book chapters**

- <u>Alix T. Coste</u> and Sara Amorim Vaz. Animal Models to study pathogenic fungi virulence and antifungal efficacy. Book chapter in From Genomics to Resistance and the Development of Novel Agents. Edited by <u>Alix T. Coste</u> and Patrick Vandeputte. Caister Academic Press Ltd, April 2015, ISBN: 978-1-910190-01-2.
- Vandeputte P., Ferrari S., Coste A.T. Antifungal resistance and new strategies to control fungal infection, Int J Microbiol. 2012; 2012:713687.

#### Book

#### Antifungals: From Genomics to Resistance and the Development of Novel Agents

Edited by <u>Alix T. Coste</u> and Patrick Vandeputte. Caister Academic Press Ltd, April 2015, ISBN: 978-1-910190-01-2. Reviewed by Dr. David S. Perlin in Clinical Infectious Diseases epub July 6, 2015, and Dr. John H. Rex in ChemMedChem, 7(10), epub 25 april 2015.

## Candidate to be elected as "Head of Environmental Microbiology section": David Johnson

Name:	David Johnson	
Private address:	Vereisnweg 7	
	CH-3012 Bern	
Date of birth:	January 14, 1978	
Citizenship:	USA	
Languages:	English, German	



## **Academic Education**

2003-2007	PhD, Environmental Engineering, University of California, Berkeley, CA, USA
2001-2002	MSE, Environmental Engineering, University of Michigan, Ann Arbor, MI, USA
1996-2000	BS, Civil Engineering, Iowa State University, Ames, IA, USA

## **Current position:**

2014- Senior Scientist and group leader, Microbial Community Assembly Group, Department of Environmental Microbiology, Eawag, Dübendorf, Switzerland

## **Previous positions:**

2009-2014	Oberassistent, Department of Environmental Systems Science, ETHZ, Zürich, Switzerland
2007-2009	Postdoctoral Scientist, Department of Fundamental Microbiology, University of Lausanne, Lausanne, Switzerland
2003-2007	Research Assistant, Department of Civil and Environmental Engineering, University of California, Berkeley, CA, USA
2001-2002	Research Assistant, Department of Civil and Environmental Engineering, University of Michigan, Ann Arbor, MI, USA
1999-2000	Laboratory Assistant, Department of Civil, Construction, and Environmental Engineering, Iowa State University, Ames, IA, USA

## **Professional Memberships:**

AAAS, AEESP, ASM, ISME, IWA, SSM

## **SSM ANNUAL MEETING**

## 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 Thursday 31<sup>st</sup> of August 2017 from 5:15 PM till 6:30 PM,

#### At the Congress Center Basel

### Agenda:

- 1. Review of the agenda
- 2. Approval of Annual Assembly Minutes
- 3. Account 2016 approval and report by auditors
- 4. Discussion of 2017 budget
- 5. Approval of 2018 budget
- 6. Approval of 2017 commission reports:
  - Prokaryotic Biology
  - Clinical Microbiology
  - Virology
  - Mycology
  - Environmental Microbiology
  - Lay Communication
- 7. New members of committee: election
  - Karl Perron
  - Alix Coste
  - Dave Johnson
- 8. New members
- 9. Website information
- 10. Lay communication
- 11. Travel Grants
- 12. SSM Annual Meeting 2018, Lausanne
- 13. Other / varia / news

\* IMPORTANT: Kindly send your inquiries by mail to the president (gilbert.greub@chuv.ch) before the 1<sup>st</sup> of August 2017.

## ERFOLGSRECHNUNG PRO 2016 MIT VORJAHRESVERGLEICH

(fur die Zeit vom	1. Januar	bis 31.	Dezember)
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	2016	Vorjahr 2015
ERTRAG	Fr.	Fr.
Mitgliederbeitrage	49 627,88	47 805,08
Unterstützung sbeitrage SCNAT	<b>4</b> 609,00	8 756,80
Unterstützung SCNAT JV 2016 Satelitensymposium	14 000,00	
Zinsertrage	195,64	295,85
Oberschusse Abrechnung Jahresversammlungen	7 602,80	9 708,15
Total Ertrag	76 035,32	· <u>66 565,88</u>
AUFWAND		
Kurse, Workshops und Symposien	1 468,50	1 045,00
Kosten Vorstand und Jahresversammlungen	295,30	7 536,80
Retraite Vorstand Hotel Beaulac Neuchatel	<b>4</b> 688,70	
Reisespesen Kommissionen		1 817,00
Spesen Vorstand und Sitzungen	480,00	5 581,70
Unterstützung sbeitrage und SGM Preis	8 240,65	5 000,00
Mitgliedschaften	8 031,16	8 833,84
EDV, Buromaterial und Kopien	666,20	1 427,70
Porti	597,00	713,25
Sekretariatskosten inkl. Buchhaltung	8 000,00	12 500,00
Sekretariat CHUV	14 064,60	
Post- und Bankspesen	495,35	288,85
Versicherungen	342,70	342,70
Reisebeitrage an Doktoranden		4 000,00
Info SGM		1 <b>868,40</b>
Diverse Ausgaben	2 428,70	2 774,30
Ausserordentlicher Aufwand	6 288,99	
Unterstützung SCNAT 2015 Phyllosphere Meeting	4 609,00	
Unterstützung SCNT Zurcher Myc. Symposium		2 756,80
Unterstützung SCNT SME 2015		6 000,00
Homepage neu		12 960,00
Korrektur Gewinn JV Fribourg 2014		5 242,55
Total Aufwand	<u>60 696,85</u>	<u>80 688,89</u>
JAHRESGEWINN	15 338,47	_
JAHRESVERLUST		14 123,01

	31.12.2016	Vorjahr 31.12.2015
	Fr.	Fr.
AKTIVEN		
Umlaufvermogen		
Kasse	13.25	42.25
Postcheck	63 346.25	166 640.60
Credit Suisse (Nr. 154434-50)	195 237.44	64 422.62
Credit Suisse Zinsstufenkonto	70 915.48	70 727.17
Verrechnungssteuerguthaben		96.71
Total Umlaufvermogen	329 512.42	301 929.35
TOTAL AKTIVEN	329 512.42	301 929.35
PASSIVEN		
Fremdkapital		
Kreditoren	8 244.60	
Ruckstellung Fond Dieter Haas	14 609.20	14 609.20
Transitorische Passiven	<u>14 000.00</u>	<u>10 000.00</u>
Total Fremdkapital	36 853.80	24 609.20
Eigenkapital (Gesellschaftsvermogen)		
Kapital: Fr.		
Stand 1. Januar 2016 277 320.15		
Jahresgewinn pro 2016 <u>15 338.47</u>	292 658.62	277 320.15
Total Eigenkapital	292 658.62	277 320.15
TOTAL PASSIVEN	329 512.42	301 929.35

### BILANZ PER 31. DEZEMBER 2016 MIT VORJAHRESVERGLEICH

## Report of the auditors

#### Bericht der Rechnungsrevisoren fi.ir die Generalversammlung

Sehr geehrte Darnen und Herren,

Als Rechnungsrevisoren haben wir die Buchfuhrung und die Jahresrechnung fur das am 31. Dezember 2016 abgeschlossene Geschaftsjahr gepruft.

Die PrOfung ist so zu planen und durchzufuhren, dass wesentliche Fehlaussagen in der Jahresrechnung mit angemessener Sicherheit erkannt werden. Wir prOften die Posten und Angaben der Jahresrechnung auf der Basis von Stichproben.

Fur die Jahresrechnung ist der Vorstand verantwo rtlich, wahrend unsere Aufgabe darin besteht, diese zu prOfen und zu beurteilen.

Die Jahresrechnung schliesst mit einem Gewinn von Fr. 15'338.47 ab. Damit erhoht sich das Vereinsvermogen von Fr. 277'320.15 auf Fr. 292'658.62

Wir empfehlen Ihnen, die vorliegende Jahresrechnung zu genehmigen, das heisst, dem Kassier Herrn Prof. Dr. Andre Burnens Decharge zu erteilen.

Dr. Jakob Zopfi Mitglied SGM

Dr. Robin Tecon Mitglied SGM

Schwarzenburg, 03. April 2017

Beilagen:

- Bilanz mit Vorjahresvergleich
- Erfolgsrechnung mit Vorjahresvergleich

## 2016 Budget

ERTRAG	
Mitgliederbeiträge	48,000.00
Unterstützungsbeitrag SCNAT	14,000.00
	1,000.00
Zinserträge	500
Überschüsse Abrechnung Jahresversammlungen	500
Total Ertrag	62,000.00
AUFWAND	
Kurse, Workshops und Symposien	3,000.00
Kosten Vorstand und Jahresversammlungen	6,000.00
Reisespesen Delegation und Kommissionen	4,000.00
Spesen Vorstand und Sitzungen	5,000.00
SGM Award	5,000.00
Mitgliedschaften	9,500.00
EDV, Büromaterial und Kopien	3,000.00
Porti	1,800.00
Sekretariatskosten	27,000.00
Support Sekretariat, Buchhaltung I. Müller	5,000.00
Post- und Bankspesen	300
Versicherungen	350
Reisebeiträge an Doktoranden	6,000.00
Defizitgarantien SGM	4,000.00
Info SGM	2,500.00
Diverse Ausgaben	1,500.00
Unterstützungsbeitrag SCNAT	14,000.00
Total Aufwand	97,950.00
JAHRESGEWINN	
JAHRESVERLUST	35,950.00

## 2017 Budget

ERTRAG	
Mitgliederbeiträge	48,000.00
Unterstützungsbeitrag SCNAT	14,000.00
Zinserträge	1,000.00
Überschüsse Abrechnung Jahresversammlungen	500.00
Total Ertrag	63,500.00
AUFWAND	
Kurse, Workshops und Symposien	3,000.00
Kosten Vorstand und Jahresversammlungen	6,000.00
Reisespesen Delegation und Kommissionen	4,000.00
Spesen Vorstand und Sitzungen	5,000.00
SGM Award	5,000.00
Mitgliedschaften	9,500.00
EDV, Büromaterial und Kopien	3,000.00
Porti	1,800.00
Sekretariatskosten	27,000.00
Post- und Bankspesen	300
Versicherungen	350
Reisebeiträge an Doktoranden	6,000.00
Defizitgarantien SGM	4,000.00
Info SGM	2,500.00
Diverse Ausgaben	1,500.00
Unterstützungsbeitrag SCNAT	14,000.00
Total Aufwand	92,950.00
JAHRESGEWINN	
JAHRESVERLUST	29,450.00

## 2018 Budget

ERTRAG	
Mitgliederbeiträge	48,000.00
Unterstützungsbeitrag SCNAT	14,000.00
Zinserträge	500.00
Überschüsse Abrechnung Jahresversammlungen	0.00
Total Ertrag	62,500.00
AUFWAND	
Kurse, Workshops und Symposien	3,000.00
Kosten Vorstand und Jahresversammlungen	6,000.00
Reisespesen Delegation und Kommissionen	3,000.00
Spesen Vorstand und Sitzungen	4,000.00
SGM Award	5,000.00
Mitgliedschaften	8,000.00
EDV, Büromaterial und Kopien	3,000.00
Porti	500.00
Sekretariatskosten	35,000.00
Post- und Bankspesen	300
Reisebeiträge an Doktoranden	6,000.00
Defizitgarantien SGM	4,000.00
Diverse Ausgaben	1,500.00
Unterstützungsbeitrag SCNAT	14,000.00
Total Aufwand	93,300.00
JAHRESGEWINN	
JAHRESVERLUST	30,800.00

## Report by the Commission "Prokaryotic Biology section" of the SSM

Prof. Patrick Viollier



The discipline of basic prokaryotic biology continues to strive and produce scientific impact at an unprecedented pace, benefiting from the rapid development of sequencing and other technologies for gene discovery by forward and reverse genetic methods, as well as large scale genotyping and phenotyping using genomic methods and chemical profiling. Switzerland is no exception to this trend and, in fact, is positioned at the forefront internationally, as evidenced by the many recent awardees of prestigious European Research Council (ERC) grants at the University of Basel, ETH Zürich, EPF Lausanne and University of Lausanne in Prokaryotic Biology. Additionally, Prof Melanie Blokesch (EPFL), also an ERC grant holder, was appointed as International Research Scholar of the very prestigious Howard Hughes Medical Institute (HHMI) and as one of 25 women whose invention changed our lives (<u>https://editionf.com/Die-25-Frauen-deren-Erfindungen-unser-Leben-veraendern</u>). We congratulate Melanie wholeheartedly to these exceptional awards.

With the recent updates of important scientific events now being posted on the events calendar on the SSM homepage (<u>http://www.swissmicrobiology.ch/events/year.listevents/2017/06/24/-</u>), we have begun to consolidate the most important science talks as well as national and international conferences (co-)organized by SSM members, and they shall no longer be mentioned here in this annual report explicitly. It is our ambition that this calendar be extended to incorporate the events hosted by other prokaryotic biology units within Switzerland.

Another future objective is the additional use of Twitter feeds to communicate events, news and job vacancies in Switzerland, as Twitter is rapidly evolving in the scientific community (and unfortunately also in politics!) to alert followers to important news and opportunities (including SNF grant calls via their Twitter account). It was through one of such recent alerts that a major breakthrough was reported in which a patient harboring an infection with a an omni-resistant *Acinetobacter baumannii* strain could be cured using cocktail of bacteriophages. This again reminds us of the importance of basic prokaryotic biology in facilitating medical and biotechnological innovations and also in disseminating them to the public using convenient and efficient media.

Patrick Vilollier, Geneva, June 2017

## Report by the Commission "Clinical Microbiology" of the SSM

Prof. Jacques Schrenzel



Members: Marisa Dolina and then Gladys Martinetti (EOLAB, Bellinzona), Meri Gorgievski (IFIK, Bern), Nadia Liassine (Dianalabs, Genève), André Burnens (Synlab), Adrian Egli (Basel), Hans Fankhauser (Kantonsspital, Aarau), Eric Grüter (Swissmedic, Bern), Hanspeter Marti (Swiss TPH, Basel), Martin Risch (Imz Dr Risch, Bern), Hans H. Siegrist (FAMH representative; ADMED, La Chaux-de-Fonds), Reinhard Zbinden (IMM, Zürich), Jacques Schrenzel (coordinator HUG, Genève).

During the past period the committee met twice in May and November 2016.

H. Siegrist has stepped down as coordinator and, J. Schrenzel, the new coordinator thanked him warmly for his work. M. Dolina has retired and she was also thanked for her contribution. We have welcomed G. Martinetti as our "Ticinese" representative.

The CCCM continues its activity in the field of federal laboratory tariffs to assure a correct reimbursement policy in medical microbiology. Two members (R. Zbinden and H.H. Siegrist, as well as M. Risch as SULM delegate) are in the FOPH working group for updating the list of analytic parameters. H.H. Siegrist is also a member of the federal committee (EAMGK/CFAMA) determining the reimbursement of laboratory testing by social insurance.

There are still no news regarding the second part of the revision (TransAL II) launched by the FOPH, and especially the date of introduction is not known.

The new FAMH programme for training in laboratory medicine is being applied by the FAMH committee of experts and the FAMH candidates. The curriculum is established and includes, at the moment, 52 tests identified with a "B" in the list of tariffs that can be performed by FAMH with microbiology as a second branch (Nebenfach), i.e. with 6 months of microbiology training.

The CCCM determines which parameters in microbiology are subject to compulsory external quality control within the scope of QUALAB (R. Zbinden). Its members also determine the pass/fail rates in close collaboration with the quality control centres.

The Swiss Antibiogram Committee (R. Zbinden et al.) and its members function as references for the federal programme determining a strategy against antibiotic resistance (StAR) which was initiated by the Federal Department of the Interior and the Federal Department of Economy. R. Zbinden continues to represent Switzerland in the EUCAST plenum and Konrad Mühlethaler, IFIK Bern, is the Swiss representative on the EUCAST Antifungal Susceptibility Testing Subcommittee.

Several SSM training courses in clinical microbiology were held in 2016. Of note, the annual meeting of the SSM took place in Bern with the Swissmedlab that was a real success. One is together with the Swiss Society of Infectious Diseases (Club de pathologie des maladies infectieuses). Finally, we celebrated the fifth Journée romande de microbiologie diagnostique in October.

R. Zbinden continues to represent Switzerland in the EUCAST plenum.

Jacques Schrenzel, Geneva, January 2017

# Report by the Commission "Virology" of the SSM



Prof. Dr. Volker Thiel

Members: Stefan Kunz (Lausanne), Angela Ciuffi (Lausanne), Cornel Fraefel (Zürich), Matthias Schweizer (Bern), Caroline Tapparel Vu (Geneva), Thomas Klimkait (Basel), Volker Thiel (Bern)

New members: Jerome Gouttenoire (Lausanne), Urs Greber (Zürich)

On January 17<sup>th</sup> 2017, the commission of the SSM Section Virology had a joint meeting with the steering committee of the Swiss Virology Meetings. Both committees discussed future concepts for promoting Swiss virologists, in particular young scientists such as PhD students and early PostDocs. One important topic was the future of the traditional Swiss Virology Meetings and it was agreed that they will take place on a biannual schedule, starting with the upcoming 7<sup>th</sup> Swiss Virology Meeting in January 2018. The organizing committee will rotate and Cornel Fraefel (Zürich) agreed to take care of the administrative organization of the next Swiss Virology Meeting. Ideally, the Students Virology Section Day that takes place one day before the annual SSM Assembly should also be organized in a biannual schedule in order to provide every year an opportunity for your researchers in Virology to present their data and to network.

Another important outcome of the meeting was that we are happy to welcome Jerome Gouttenoire (Lausanne) and Urs Greber (Zürich) as new members of the SSM Virology Section Committee. All members of the steering committee of the Swiss Virology Meetings are now included in the SSM Virology Section Committee which will greatly facilitate the coordination of future events. Urs Greber is member of the committee of the European Society for Virology (ESV) and member of the "Beirat" of the German Society for Virology (GfV) and will there represent the SSM.

The main activities of the SSM Section Virology committee in the near future will be to coordinate the SSM Virology and the Swiss Virology meetings, to communicate important dates and events to the virology community via the SSM web page, and to continue to promote young researchers in the field of Virology.

Volker Thiel, Bern, January 2017

# Report by the Commission "Mycology" of the SSM

Prof. Dr. Dominique Sanglard



In 2016, the Mycology section organized a one day satellite Mycology symposium in the frame of the annual meeting held in Bern. This symposium was spit in 4 sessions including diverse aspects of Mycology including yeast molecular biology, fungal interactions with the environment, fungal immunity and antifungals developments. Each session included an invited speaker and selected short talks from abstract submissions. This format was highly appreciated by the audience (approx. 60 participants) and will be repeated in the future (Lausanne meeting 2018).

The mycology section approached the European Confederation of Medical Mycology in 2015 and the affiliation should be finalized in 2017.

After serving several years as the head of the Mycology section in the SSM, Prof D. Sanglard will hand the lead to Dr. Alix Coste (Institute of Microbiology CHUV), who will serve from 2017 on going (if her application is validated by the 2017 assembly in Basel).

Dominique Sanglard, Lausanne, June 2017

## Report by the Commission "Environmental Microbiology" of the SSM

Prof. Christof Holliger



The year 2016 was characterized by several important events linked to environmental microbiology. The traditional two-days Annual Meeting of SSM was for the first time preceded by one-day satellite symposia organized by each section. The concept of these satellite symposia is to provide young scientist a platform to present their work with short talks and not only posters, to network with each other, and to bring them in contact with more established researchers in the respective fields. The satellite symposia were co-financed by a generous contribution of SCNAT. They took place on June 13 in Berne at Bernexpo followed by the Annual Meeting on June 14-15 that joined in the Swiss MedLab 2016 event organized by SULM, the united society of laboratory medicine. The four invited speakers of the Swiss Environmental Microbiology Symposium 2016 were Tom Battin from EPFL, Lausanne, Bastiaan Ibelings from the University of Geneva, Jakob Pernthaler from the University of Zürich, and Dagmar Woebken from the University of Vienna. They all presented interesting and inspiring talks. The sixteen talks of young scientists were of high quality and originality too and witnessed the talent and enthusiasm of young people in this field of research. During the lunch break, the commission of the environmental microbiology section had its first meeting where it discussed future activities.

At the General Assembly of SSM that took place during the Annual Meeting, two members of the environmental microbiology section became honorary members of SSM. Rainer Bachofen, emeritus professor of the University of Zürich, served SSM for many years as committee member. His main research focus were photosynthetic bacteria. Michel Aragno, emeritus professor of the University of Neuchâtel, was a former president of SSM and he organized the first SME, the Swiss Microbial Ecology meeting, in 2004. His main research focus were soil microorganisms and their involvement in biogeochemical cycles of different elements.

Another event with a strong link to the environmental microbiology section of SSM was ISME16, the 16<sup>th</sup> International Symposium on Microbial Ecology that took place in Montréal, Canada, from August 21-26, 2016. A numerous delegation of Swiss scientists attended the interesting meeting.

Finally, due to a reorganization within the committee of SSM, the lead of the environmental microbiology section will change in 2017. After only two years, I, Christof Holliger, will hand over the task as section coordinator to David Johnson from Eawag, and I will take over the treasurer position of SSM. It was a pleasure to set up and lead this new section of SSM. I will remain a member of the commission of the section and follow its activities with big interest.

On behalf of the Commission Environmental Microbiology and the SSM I would like to thank all the active members and the many helpers in the back for their precious work.

Christof Holliger, Lausanne, January 2017

## Report by the Commission "Lay Communication" of the SSM

Dr. Karl Perron



Communication in microbiology has become essential to relay the importance of this discipline and to respond not only to the anxieties and inquiries of the general public concerning infectious diseases, but also to put forward the utility of basic research in microbiology. The SSM has decided to create a new section called "Lay communication" intended to achieve these objectives. An initial meeting was held last September with Prof. G. Greub, V. Thiel, J. Schrenzel and Dr K. Perron. The main objectives of this section will be:

- to promote interest in and knowledge of microbiology to the general public
- to exchange ideas, promote best practices and join efforts in communicating microbiology

A website (swissmicrobes.ch) will be created to disseminate information on microbiology research performed in Switzerland. Communication sessions will be organized at each SSM conference. All researchers involved in communication activities will be given the opportunity to present their outreach projects. In addition to the creation of a microbiology communication website, various activities are being envisaged: itinerant theater play, board games, exhibitions, conferences, etc. These activities will also be dedicated to teachers and schools. For this, a close link between the SSM and the BiOutils interface (www.bioutils.ch) of the University of Geneva and to the lay communication team of the institute of microbiology of Lausanne (IMUL) will be set up. The new website will thus initially mainly be developed by the BiOutils and IMUL in French and then, if this satisfies the SSM community, this effort might be further supported by the SSM to be extended to the German- and Italian-speaking region and to also incorporate an English version. Researchers willing to become a member of the lay communication section are welcome to contact us at the following email: Karl.Perron@unige.ch.

Karl Perron, Geneva, January 2017

## News: The Swiss Society of Microbiology would like to approach more closely its members



Prof. Pilar Junier

As part of the mission of the SGM-SSM to promote the advancement of microbiology in Switzerland and to encourage the career development of our young members, we aim to create a Students and Postdoc focal point. We would like to invite our student and postdoc members interested in providing feedback and ideas, to get together for a discussion in our coming meeting in Basel.

People interested please contact Pilar Junier (pilar.junier@unine.ch).

## **SSM MEMBERS**

## **Deceased members**

## In memoriam of Dieter Haas - Text prepared by Jan Van Der Meer

Dieter Haas (1945-2017)

Passionate teacher and microbiologist, Dieter Haas died at his home in Zumikon on April 22. As former colleague and mentor, Dieter has been instrumental for the development of microbiology at the University of Lausanne.

Dieter's adventures in microbiology led him from the remarkable and versatile adaptation mechanisms of *Pseudomonas aeruginosa* to the potential utility and regulation of secondary metabolites produced by the plant-beneficial bacterium *Pseudomonas fluorescens* and the regulatory roles played by small non-coding RNAs. He was one of the leading world specialists in these domains.

Dieter joined the DMF in 1993 as Associate Professor and was promoted to Full Professor in 2002. He was acting President of the Swiss Society for Microbiology from 2001-2003 and representative of the SSM to the European Federation of Microbiological Sciences (FEMS). He was Chief Editor of FEMS Microbiology Reviews from 2009 to 2013, which he helped establishing the impact the journal has today.

Dieter was a passionate teacher in microbiology, bacterial genetics and microbe-plant interactions, widely appreciated by students. He supervised numerous PhD students and postdocs, and was a helpful mentor to collaborators and colleagues at the Department. In his private life, he was an equally passionate magician and his performance at the Pseudomonas conference in Lausanne in 2013 will be vividly remembered.

## In memoriam of Heinz Müller - Text prepared by Reinhard Zbinden

Die SGM hat die schmerzliche Pflicht, den Mitgliedern mitzuteilen, dass Dr. med. vet. Heinz K. Müller, verstorben ist.Herr Müller war über lange Jahre ständiges Mitglied des Vorstandes der SGM. Heinz war für die externe Kommunikation zuständig und hat mit grossem Aufwand jeweils die Newsletter der SGM erstellt und verschickt wie auch die Homepage gepflegt. Zusätzlich hat er seine Frau Irene, langjährige Sekretärin der SGM, unterstützt und jeweils die Protokolle der Jahresversammlungen erstellt. Die aktuellen und früheren Mitglieder des Vorstandes werden Heinz in dankbarer Erinnerung bewahren.

## In memoriam of Helmut Brandl - Text prepared by Reinhard Bachofen

Am 6. Januar 2017 verstarb nach längerer Krankheit unser Mitglied Prof. Dr. Helmut Brandl, Institut für Evolutionsbiologie und Umweltwissenschaften der Universität Zürich. Nach dem Doktorat 1986 an der Universität Zürich über durch Mikroorganismen katalysierte Stoffkreisläufe in Sedimenten des Genfersees mittels in situ Messungen vom Forschungstauchboot von Jacques Piccard aus folgten 2 Jahre in den USA an die University of Massachusetts in Amherst. Nach seiner Rückkehr an die Universität Zürich leitete er die Koordinationsstelle für das neu geschaffene Nachdiplomstudium Umweltwissenschaften. 1991 wurde ihm von der SGM der Förderpreis verliehen. Später war er für mehrere Jahre Revisor der Gesellschaft. 1997 habilitierte er sich für das Fachgebiet Mikrobiologie und leitete die Forschungsgruppe «Environmental Microbiology and Biotechnology» am neu gegründeten Institut für Evolutionsbiologie und Umweltwissenschaften. 2013 erfolgte die Ernennung zum Titularprofessor. Seine Forschungsarbeiten sind vielfältig, Publikationen entstanden nicht selten in Kooperation mit Forschungsgruppen aus angrenzenden Disziplinen sowie aus europäischen Schwellenländern.

Eine Gedenkfeier findet am 9. Februar 2017 um 17 Uhr an der Universität Zürich Irchel statt (Besammlung im Lichthof).

## Current list of "Honorary members":

- Prof. Dr. ARBER Werner
- Prof. Dr. Méd. BILLE Jacques
- Prof. Dr. PIFFARETTI Jean-Claude
- Prof. Dr. Méd. VON GRAEVENITZ Alexander
- Prof. Dr. ARAGNO Michel
- Prof. Dr. BACHOFEN Reinhard

## **New members**

- Arora Natasha
- Gruber Stephan
- Hapfelmeier Siegfried
- Jones Amy
- Jores Jörg
- Künzi Markus
- Künzli Christina
- Lambert Bennett
- Lazarevic Vladimir
- Lazdins Alessandro
- Möller Jens
- Mouammine Annabelle
- Poirel Laurent
- Ramette Alban
- Schmolke Mirco
- Vallet Simon-Ulysse
- Voellmy Irene
- Wetter Slack Emma
- Yashiro Erika

## Membership Form Application

WSS Applic	cation for member	ship of the Sw	iss Society for Microbiology
According to Art. 7 of the Artic of the Swiss Society for Microb		ndersigned wishes	to apply for membership
Ordinary member CHF 75.00 p.a.	Collective member CHF 300.00 p.a.		
Last name		First nan	ne
Academic qualification / title		Obtaine	d from (Academic institution / year)
Apadamia atatua taday			
Academic status today			
A dalar an alata ila Gan anno anno			
Address details for correspon	dence (preferably work	E_mail:	ny)
		Phone business:	
		Phone private:	
		Phone mobile:	
		Fax business:	
Which section(s) you would y			
		aryotic biology	Virology Mycology
Date		Signature	
Supporting member (1)		Supporting me	mber (2)
Signature:		Signature:	

Nathalie MERMOUD/ Route d'Yverdon 3 / CH-1033 Cheseaux-sur- Lausanne secretary@swissmicrobiology.ch

# **SSM AFFILIATIONS**

The SSM is currently affiliated to the following societies:



# CALENDAR OF UPCOMING EVENTS, SYMPOSIA, COURSES, WORKSHOPS

UPCOMING 2017 EVENTS					
July 2017					
07	Jorg Vogel EPFL SV seminar				
25-28	20th International Workshop on Kaposi Sarcoma Herpes Virus (KSHV) and Related Agents				
August- Septem	August- September 2017				
30 Aug - 01	g - 01 SSM Annual meeting in Basel				
Sept					
02 Sept	Symposium focusing on Whole Genome Sequencing in Clinical Microbiology				
October- Novem	ber 2017				
03 Oct	6ème Journée de formation en microbiologie diagnostique				
11-13 Oct	10th European Meeting on Molecular Diagnostics				
19-20 Oct	2nd International Conference on Clinical Metagenomics (ICCMg2)				
24 Oct	Inaugural plenary lecture by Professeur Stefan Kunz				
26-27 Oct	5th World Congress on Targeting Microbiota				
30 Oct- 01 Nov	ESCMID-NGS meeting				
December 2017					
02-05	10th World Congress of the World Society for Pediatric Infectious Diseases				
UPCOMING 2018 EVENTS					
February 2018					
12-13	LS2 Annual meeting 2018 "Metabolism & Signaling in the Life Sciences"				
18-21	70th Annual meeting of the German Society for Hygiene and Microbiology				
March 2018					
21-24	28th anniversary of the German Society for Parasitology				
July 2018					
01-06	14th International Symposium on Human Chlamydial Infections (ISHCI) 2018				
August 2018					
28-30	SSM Annual meeting in Lausanne				

\*All events details can be found on our website <a href="http://www.swissmicrobiology.ch/events/">http://www.swissmicrobiology.ch/events/</a>

## **TRAVEL GRANTS REPORTS 2016**

In 2016, the SSM provided 8 travel grants for various conferences around the world, below is the list of beneficiaries followed by their respective reports:

- **Mario Hupfel** to attend the EMBO Conference: Problems of Listeriosis ISOPOL XIX 14.-17.06.2016 at the Pasteur Institute in Paris, France
- Greta Faccio, to attend to the 8th European Meeting on OxiZymes conference held from the 3rd to 6th of July 2016 in Wageningen, Netherlands
- **Linda Mueller**, to attend the 2nd ASM conference on Experimental Microbial Evolution, from august 4 to august 7 in Washington DC.
- **Isabel Hunger-Glaser** to attend the 10th SBNet Meeting, 25 and 26 August, at the EPFL in Lausanne 2016
- **Ludovic Pilloux** to attend the 8th meeting of the European Society for Chlamydia Research, from 6 to the 9 September 2017, in Oxford.
- Franziska Schönherr to attend the 13th ASM conference on Candida and Candidiasis October 13-17 2016, Seattle, WA
- Marie Delaby to attend the 1st "EMBO" conference on "Bacterial morphogenesis, survival and virulence: Regulation in 4D" held from the 27th of November 1st of December 2016 in Thiruvananthapuram, Kerala, India.
- Noemie Matthey to attend the 1st "EMBO" conference on "Bacterial morphogenesis, survival and virulence: Regulation in 4D" held from the 27th of November - 1st of December 2016 in Thiruvananthapuram, Kerala, India

## Mario Hupfeld, SSM Travel Grant Report, June 2016

EMBO Conference: Problems of Listeriosis ISOPOL XIX 14.-17.06.2016 at the Pasteur Institute in Paris, France

By Mario Hupfeld, Institute of Food Nutrition and Health, Food Microbiology, ETH Zurich

The ISOPOL meeting is a famous conference series which started already in 1957 in Giessen, Germany. For the 19<sup>th</sup> meeting, this conference was held at the Pasteur Institute in Paris. Organizer was Pascale Cossart, one of the leading experts in *Listeria* research. A remarkable feature of the ISOPOL conferences is the vivid mix of applied medical research and molecular biology. In my experience this put one's own research efforts in a new perspective and was very stimulating.

The conference started Tuesday afternoon with overview key note lectures by top scientists from the field covering topics from antibiotic resistance, bacteriophage, pathometabolism to a historical perspective of *Listeria* Research. After that, the Seeliger Prize was given in a small ceremony to Werner Goebel from the Ludwig-Maximilian University in Munich. He was honoured for his lifetime achievements in the field of *Listeria* research. The Seeliger is awarded every three years with a prize money of 5000 Euro. This first session was closed by the violinist Marianne Piketty, performing with her son Guillame Durand on the piano, masterpieces from French composers like Franck and Ravel as well as some pieces from Chopin.

Wednesday was opened by a session on *Listeria* in the hospital setting. When talking about the epidemiology of *Listeria* the talk of Kathie Grant (Public Health, London) was representative for this session. The title "*Whole Genome Sequencing for Routine Surveillance of Listeria*" indicates the focus that many scientists in this area follow now. Unsurprisingly, it is whole genome sequencing, which has become cost effective for this applied topic of research. This opens up new possibilities when comparing strains of different listeriosis outbreaks making the surveillance of strain distribution much easier. It is nevertheless astonishing, how fast this adaptation to this technology develops.

Spanning Wednesday to Friday the talks on the molecular biology of Listeria were very diverse, and showed the various different approaches taken, in understanding the infection of this pathogen. This covered the entire life cycle of Listeria from invasion, replication inside the host cell, cell to cell spread up to the real scenario of interaction with host cells at the maternal-fetal interface (a fascinating talk by Anna Barkadjiev, University of California). My personal favourite was of course a bacteriophage related work (by Anat Herskovits, Tel-

Aviv) showing that temperate bacteriophages and *Listeria* might work together during human cell infection to facilitate this process. More about this very interesting research can be found in the recently published review "A new perspective on lysogeny: prophages as active regulatory switches of bacteria", Nature Review Microbiology 2015.

However, there were plenty of other inspiring talks on *Listeria* infection. A few that I would subjectively highlight include the presentations by Marc Lecuit (beautiful microscopy related to *Listeria* infection and ActA), José-Antonio Vasquez-Boland talking about virulence switches in *Listeria*, especially prfA and Dan Portnoy discussing cell-mediated immunity and the implication for future vaccine development.

Closed was the conference by the organizer Pascale Cossart with a talk presenting thrilling new data on the identification of a function for some small proteins encoded by *Listeria*.

The conference was attended by close to 300 participants, most of them from Europe and North America but also by groups from Asia.

The social program included a visit in the Pasteur Museum where we could look at the rooms where Louis Pasteur worked and lived in the 19<sup>th</sup> century. The finely prepared rooms gave a very interesting impression of the daily life of the French scientists including pastel drawings made by Louis Pasteur himself throughout his life. On Thursday, a gala dinner was held at the museum d'Orsay including a museum visit beforehand. This gave all participants the nice opportunity to socialize. Within this short summary it is impossible to give a full account of the diverse topics presented at the conference. However, for the interested reader, the Pasteur Institute announced to publish a conference summary. Personally I can say that the conference was a great opportunity to learn more about the field of my research advance my presentation skills as well as get into touch with many great scientists from all over the world. In this context, I would like to thank the Swiss Society for Microbiology for awarding me one of its travel grants making this great experience possible.

## Greta Faccio, SSM Travel grant report, July 2016

8th European Meeting on OxiZymes conference held from the 3rd to 6th of July 2016 in Wageningen, Netherlands



Held every second year and at Wageningen University in 2016, Oxizymes is a conference focusing on oxidoreductases and reporting on their discovery, their characteristics, their applications while gathering experts from academia and industry. In the Sophie Vanhulle lecture, I presented examples of how microbial oxidative enzymes can be used to functionalize material surfaces either as catalysts for protein immobilization or as functional molecules to be immobilized. Proteins and materials are indeed combined in a variety of devices of everyday use that find application in the energy,

biomedical, and diagnostics fields. To preserve the bioactivity of proteins while minimizing the deleterious effects caused by the interaction with the material surface, the controlled and site-specific immobilization of proteins is desired. We explored enzymatic and affinity-based approaches using fluorescent proteins, enzymes, and peptides. The specificity offered by the fungal enzyme tyrosinase has been applied to the immobilization of fluorescent proteins in a site-specific manner. These were genetically engineered to carry one exposed tyrosine residue that, specifically recognized by tyrosinase, could be oxidized and further react with functional groups on the material surfaces that thus acquired an intense fluorescence. By genetic engineering, proteins can also be modified to carry affinity motives for specific materials. We recently engineered a fluorescent protein and a bacterial laccase from *Bacillus pumilus* with an affinity peptide for iron oxide. This promoted the binding of the fluorescent protein to the material surface and, in the case of the enzyme, led also to an enhancement in catalytic activity. To develop highly functional surfaces in which all components are present under their optimal working conditions, the development of novel approaches aiming to control the interaction of proteins with materials is crucial and a rich topic of study.

## Linda Mueller, Phd student, Lausanne, SSM Travel grant report, August 2016

2nd ASM conference on Experimental Microbial Evolution, from august 4 to august 7 in Washington DC.

This summer, thanks to the financial support of the SSM I had the great opportunity to attend the **2nd ASM conference on Experimental Microbial Evolution**, from august 4 to august 7 in Washington DC.

Approximatively 150 people came from over 17 states of America, Canada, New Zealand and 7 European nations converged to this amazing event.

The keynote session opening the conference was led by Richard Lenski, the brilliant designer of the long term evolution experiment in *E. coli*. With charisma and clarity, he brought the audience through the characterization of the mode and tempo of 12 *E. coli* populations evolution over 65000 generations (~28 years). The day after, been awake since 5 am because of the thrill (or because of the jetlag), I prepared myself to follow the 10 sessions covering a broad range of topics: (1) Evolutionary Dynamics, (2) The Fitness Landscape, (3) Genome Evolution, (4) Co-evolutionary Arms Races, (5) Epistasis and Coevolution, (6) Pleiotropy and Trade-offs, (7) Symbiosis and the Evolution of Cooperation, (8) Cooperation on the Verge of a Major Evolutionary Transition, (9) Evolution of Drug Resistance, (10) Experimental Evolution Meets Systems Biology. All talks highlighted the major discoveries made recently on several organisms, from bacteria to yeast, viruses and flies. Different experimental designs and mathematical model were presented, to estimate the frequency of mutations through generations and evaluated fitness, adaptation, interactions, development of drug resistance and so on. Definitely the most exciting conference I have attended so far.

This conference was also a good opportunity for me to present my own data performed in the group of Prof. Greub on the evolution of Lausanne virus and *E. lausannensis* in amoeba during one year (panel B), which attracted the interest of some participants

# Isabel Hunger-Glaser, SSM Travel Grant Report, August 2016

10th SBNet Meeting, 25 and 26 August, at the EPFL in Lausanne 2016

The 10th Meeting of the Swiss Biosafety Network (SBNet) was held at the new conference Center of the EPFL, in Lausanne.

The Swiss Biosafety Network SBNet is an independent, national organisation open to all biosafety and biosecurity professionals including engineering and maintenance staff.

SBNet aims to maintain a high level of biosafety and biosecurity by sustaining and supporting implementation of applicable and practical solutions. This is achieved by exchanging first-hand information on the practical aspects of biosafety and biosecurity, acting as an interface between the authorities and institutions that have to implement biosafety and biosecurity measures and by fostering relations with national and international organisations.

The main goal is to organise every year an annual applied biosafety meeting at a different location within Switzerland.

This meeting promotes discussions on emerging biosafety and biosecurity topics and are the best opportunity to have an exchange of information among biosafety professionals.

The first meeting was held at the University of Zurich in 2007, with about 50 participants. The 10th anniversary meeting took place at the EPFL and accommodated about 170 people. As it was a special event we had for the first time a two-day meeting (25 and 26 August). The first day was organised in collaboration with the Swiss Society of Occupational Hygiene (SSOH) and with Animal Biosafety Community.

The topics of the second day were (i) Sciences meets biosafety, (ii) Applied biosafety, and (iii) Biosecurity. The presentations were held by successful Swiss and also foreign researchers and biosafety professionals. The audience was very enthusiastic and considered the talk as very good and helpful for their daily duties.

For us as organizers and according to the evaluation forms from the participants the meeting was again a big success.

We are looking forward to the next meetings in Basel, which will take place on August 24th and 25th, 2017 and in Lugano on August 23th and 24th, 2018 at the Palazzo dei Congressi.

The meeting was supported financially by the Swiss Society for Microbiology (SSM), the Federal Office of Public Health (FOPH), the Federal Office of Environment (FOEN), the EPFL, IVI, b-safe, the Swiss Expert Committee for Biosafety (SECB) and others.

Dr. Isabel Hunger-Glaser, Council member of the SBNet , Executive manager of the SECB, Swiss Expert Committee for Biosafety

## Ludovic Pilloux – PhD student - SSM travel grant report – September 2016

## 8<sup>th</sup> meeting of the European Society for Chlamydia Research, from 6 to the 9 September 2017, in Oxford.

From 6 to the 9 September, thanks to the financial support of the SSM and of the Institute of Microbiology of the University of Lausanne I had the great opportunity to participate to the **8**<sup>th</sup> meeting of the **European Society for Chlamydia Research**, in Oxford.

The congress started by the welcome reception, which was a great opportunity to meet with all the participants in a warm and friendly atmosphere, that persisted throughout all four days of the meeting. The two first days were mainly dedicated to basic research on chlamydiae, with plethora of interesting talks.

During the first session, about molecular biology, Raphael Valdivia presented an exhaustive genetic analysis of the *Chlamydia* pathogenesis, highlighting the necessity to master chlamydial genetic transformation. The afternoon was dedicated to cell biology with didactic talks brightened up by very high quality confocal and electron microscopy pictures. The second day morning was dedicated to host immune response to chlamydia infection with a very interesting talk, by S. Webster, about inflammasome activation by *C. trachomatis*, a subject directly linked to my PhD project, and many other inspiring immunology talks. After a fruitful discussion on this topic at the lunch, we continued on the afternoon with the session dedicated to other chlamydial species (any other than *C. trachomatis*), including the bacteria we are working on (*Waddlia chondrophila, Parachlamydia acanthamoebae, Estrella lausannensis*). The clinical research was presented during the last two days, with talks about epidemiology, serology, and diagnostics, including a very hot topic regarding about the oncogenic potential of chlamydial infections.

I had the unique opportunity to present my work, to answer questions and to have fruitful discussions during the two poster sessions on Tuesday and Wednesday afternoon. These sessions allowed me to make new collaborations to complete results that were already obtained. This will be really fruitful for my PhD thesis, bringing new insights and novel perspectives.

# Franziska Schönherr, SSM Travel Grant Report, October 2016

## 13th ASM conference on Candida and Candidiasis October 13-17 2016, Seattle, WA

The ASM conference is one of the most important forum for the Candida research community. Attendance at the conference and the presentation of my project as a talk and poster gave me the opportunity to network with leading researchers in my field and to get critical input for my project.

ASM is an international meeting in the field of fungal infections. The scientific program included sessions about fungal and host signalling, clinical session, poster presentations and elevator talks. The conference started with a big plenary session held by Judith Bermann. This talk gave an overview of the dynamics of the genome of *Candida albicans*.

During the conference I heard outstanding lectures on fungal infections, new techniques and host-fungus interaction.

I had the possibility to give an elevator talk and present a poster with the title "Impact of natural diversity of *Candida albicans* on the balance between commensalism and pathogenicity. With the elevator talk I could get a great attention on my project and during the poster presentation I had several very interesting discussions with attendees with a different research background.

The congress gave me the possibility to broaden my knowledge on fungal diseases and hostpathogen interactions. I met possible collaborators and got great input, what really helps me for my future work.

I want to thank the Swiss Society for Microbiology for the financial support and the possibility to attend such a great conference.

Franziska Schönherr, UZH, LMA Bellinzona Zurich, October 2016

## Marie Delaby, SSM Travel Grant Report, December 2016

1st "EMBO" conference on "Bacterial morphogenesis, survival and virulence: Regulation in 4D" held from the 27th of November - 1st of December 2016 in Thiruvananthapuram, Kerala, India.

Thanks to the financial support of the SSM I had the great opportunity to attend the 1st EMBO conference on "Bacterial morphogenesis, survival and virulence: Regulation in 4D" in such an amazing location Thiruvananthapuram, Kerala, India.

The conference provided a full survey of various key areas of bacterial biology including cell division, persistence and virulence thanks to experts of the different fields. I had the chance to attend many exciting and inspiring talks and I decided to highlight two different ones not directly linked to my ongoing project that I particularly appreciated.

The first one was about persistence and dormancy by Dr Sophie Helaine from the Imperial College London. Persisters are non-growing, multidrug-tolerant bacteria involved in infections. She presented recent work about *Salmonella* that forms intra-macrophages persisters thanks to acetyltransferase toxins (Cheverton et al., 2016) that will inhibit translation and how growth resumption is allowed thanks to a mechanism that detoxifies the acetylated tRNAs and then the cell. Her talk highlighted how the charged tRNAs are cleaved and addressed the question about the specificity in cleavage.

The second talk was given by a PhD student, Noémie Matthey, from Melanie **Blokesch lab in EPF Lausanne**, about the type VI secretion system (T6SS) killing device in *Vibrio Cholerae*. It was previously discovered that T6SS genes are co-regulated with genes involved in DNA uptake and that T6SS allows acquisition of free DNA (Borgeaud et al., 2015). Then, she suggested that *V. cholerae* can adapt and evolve in their natural environment by taking up preferentially genetic material released from the killed prey up to several hundreds of kilo basepairs.

This conference was also an excellent chance to meet and exchange during conferences, poster sessions, coffee breaks and conference dinner with academics but also a good opportunity to present my work to the scientific community. It enabled me to obtain, by experts in the field, a critical analysis of my research.

Borgeaud, S., Metzger, L.C., Scrignari, T., and Blokesch, M. (2015). The type VI secretion system of Vibrio cholerae fosters horizontal gene transfer. Science *347*, 63–67.

Cheverton, A.M., Gollan, B., Przydacz, M., Wong, C.T., Mylona, A., Hare, S.A., and Helaine, S. (2016). A Salmonella Toxin Promotes Persister Formation through Acetylation of tRNA. Mol. Cell *63*, 86–96.

# Noemie Matthey, SSM Travel Grant Report, December 2016

1st "EMBO" conference on "Bacterial morphogenesis, survival and virulence: Regulation in 4D" held from the 27th of November - 1st of December 2016 in Thiruvananthapuram, Kerala, India.

I had the honor to receive a SSM travel grant to attend the first EMBO conference on "Bacterial morphogenesis, survival and virulence: regulation in 4D", which took place in the astonishing capital of the Indian state of Kerala, Thiruvananthapuram, from the 27<sup>th</sup> of November to December 1<sup>st</sup> 2016. During this interesting conference, which brought together numerous experts from all over the world, the field of bacteriology was covered within 15 sessions on various topics such as "Genome biology", "Microbial stress and interactions", "Virulence and secretion" or "Morphogenesis and machines".

The opening lecture was given by Prof. Jeff Errington (Newcastle). He gave a brilliant talk on wall-deficient or so-called L-form bacteria, a lifestyle that may help these organisms to survive treatment with cell wall-targeting antibiotics. Also during the first session, Dr. Nathalie Campo (Toulouse) talked about natural competence for transformation in *Streptococcus pneumoniae*. More precisely, she showed how a competence protein is delaying cell division in order to preserve genome integrity. Another fascinating story, among many others, was presented by Prof. Marie Elliot (Hamilton). She revealed an interaction of *Streptomyces* bacteria with fungi and that this exploratory behavior is based on the production of a volatile compound.

Importantly, I myself had the great opportunity to present my doctoral work performed in the group of Prof. Melanie Blokesch at EPFL as a short talk and through a poster presentation, both of which gave me the opportunity to discuss my work with and receive feedback from several prestigious researchers. My research is focusing on the acquisition of exogenous DNA via natural transformation of *Vibrio cholerae*. This mode of horizontal gene transfer is enhanced by deliberate neighbor predation and lysis by means of the pathogen's type VI secretion system. Overall, my participation to this conference and the ability to present my research was a wonderful experience, which was rewarded by the organizers through a poster prize.



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