



## The International Organization for Mycoplasmaology (IOM) IOM Newsletter

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Volume 42, Number 1, April 2018

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**Chair:** Prof Cecile Bébéar (France); **Chair-Elect:** Dr Glenn Browning (Australia); **Past Chair:** Dr Steven Djordjevic (Australia); **Secretary-General:** Dr Brad Spiller (UK); **Treasurer:** Dr Naola Ferguson-Noel (USA); **Membership Secretary:** Dr Sabine Pereyre (France); **IRPCM Chair:** Dr Christine Citti (France); **Information Officer:** Dr Mitchell Balish (USA); **Board Members-At-Large:** Dr Li Xiao (USA); Dr Paola Pilo (Switzerland); Dr Joerg Jores (Kenya); Dr Steven Szczepanek (USA); Dr Cheryl Jenkins (Australia); Dr. Chih-Horng Kuo (Taiwan).

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### **IOM Congress 2018 – April 30<sup>th</sup> deadline for late breaking abstracts!**



[www.iom2018.org](http://www.iom2018.org)

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## *MESSAGE FROM THE IOM CHAIR*

Hello friends and colleagues

The next IOM congress in Portsmouth, New Hampshire, USA (9-12 July 2018) is just around the corner. Much work has been going on within the Scientific Program Committee, the IOM Award Committee and the local organizing committee.



The scientific program committee chaired by Li Xiao is finalizing the abstracts reviews and the abstract notification has send out.

I'll take the opportunity to personally congratulate the awardees of the 2018 IOM Scientific Awards: the 2018 Emmy Klieneberger-Nobel Award for outstanding research in Mycoplasma to Joachim Frey (Switzerland); the 2018 Derrick Edward Award for outstanding research in Mycoplasma by young investigator to Rohini Chopra-Dewasthaly (Austria); the 2018 Peter Hannan Award for outstanding research in Applied Clinical Mycoplasma to Lisa Manhart (USA) and the 2018 Robert F. Whitcomb Award for outstanding research achievements in the field of plant and insect Mycoplasma to Yan Zhao (USA). I wish thank the members of the Awards committee and especially the Chair, Pascal Sirand-Pugnet, for their hard work over the past 12 months.

I warmly welcome the new chair-elect of the IOM, Steven Geary, the new secretary-general, Brad Spiller, and the new treasurer Maria Peters for the next two to four years. I personally would like to thank Gail Gasparich, our outgoing treasurer, who kindly agreed to carry on the job during the current biennium.

Finally, I'll remind all members to update their IOM membership and to encourage new membership in the IOM.

I look forward to seeing many of you again in Portsmouth.

Best regards,

Cécile Bébéar

Bordeaux, France

**22nd Congress of the International Organization for Mycoplasmaology  
July 9-12, 2018 Portsmouth, New Hampshire USA**

**ABSTRACTS:** April 30<sup>th</sup> is the last day to submit late breaking abstracts! Don't miss this deadline.

<https://www.iom2018.org/abstracts>

**ACCOMODATION:** The Harborside Conference Center is located in the Sheraton Harborside Hotel. A block of rooms has been reserved at a special conference rate (\$219). Another block of rooms has been reserved at the Best Western Hotel, located 1 mile from the Harborside Conference Center, at \$140 per night. Reservations must be made by JUNE 8 for group rates to apply

**PROGRAM:**

## IOM 2018 Preliminary Program

July 08 Sunday	July 09 Monday	July 10 Tuesday	July 11 Wednesday
<p><u>Closed Board Meetings</u></p> <ul style="list-style-type: none"> <li>International Committee on Systematics of Prokaryotes, Mollicutes Subcommittee</li> <li>International Research Programme on Comparative Mycoplasmaology (IRPCM) Executive Board</li> <li>2016-2018 IOM Executive Board</li> </ul> <p><b>Welcome Reception</b></p>	<p><b>Opening Ceremony</b> <i>Keynote: Roy Curtiss</i> <i>(coffee break)</i></p> <ul style="list-style-type: none"> <li>platform presentations <i>(lunch break)</i></li> </ul> <p><b>D. Edward Award Lecture</b> <i>Rohini Chopra-Dewasthaly</i></p> <ul style="list-style-type: none"> <li>platform presentations <i>(coffee break)</i></li> <li>platform presentations</li> <li>IRPCM working group meetings</li> </ul>	<p><i>Keynote: Karen Nelson</i></p> <ul style="list-style-type: none"> <li>platform presentations <i>(coffee break)</i></li> <li>"short talks from posters" <i>(lunch break)</i></li> </ul> <p><b>E. Klieneberger Award Lecture</b> <i>Joachim Frey</i></p> <ul style="list-style-type: none"> <li>platform presentations <i>(coffee break)</i></li> <li>poster session 1</li> <li>IRPCM working group meetings</li> <li>2018-2020 IOM Executive Board closed meeting</li> </ul>	<ul style="list-style-type: none"> <li><b>R. Whitcomb Award Lecture</b> <i>Yan Zhao</i></li> <li>platform presentations <i>(coffee break)</i></li> <li>platform presentations <i>(lunch break)</i></li> <li>platform presentations <i>(coffee break)</i></li> <li>poster session 2</li> <li>IRPCM working group meetings</li> </ul> <p><b>IOM Congress Banquet</b></p>
July 12 Thursday	Notes		<i>Special Session on Antimicrobial Resistance</i>
<p><b>Special Session on Antimicrobial Resistance</b> <i>Keynote: Romney Humphries</i></p> <ul style="list-style-type: none"> <li>platform presentations <i>(coffee break)</i></li> <li>platform presentations <i>(lunch break)</i></li> </ul> <p><b>P. Hannan Award Lecture</b> <i>Lisa Manhart</i></p> <ul style="list-style-type: none"> <li>platform presentations <i>(coffee break)</i></li> </ul> <p><b>Closing Ceremony</b></p>	<ul style="list-style-type: none"> <li>Platform presentations will be grouped by topic such as molecular and cell biology, pathogenesis, epidemiology, diagnostics, chemotherapy, immunopathology, and vaccinology.</li> <li>Each platform session will be chaired by two members of the IOM 2018 Scientific Program Committee having relevant expertise in the topic.</li> <li>All posters will be on display all week in lobbies adjoining the main auditorium. 2-hr sessions Tuesday and Thursday afternoons are dedicated to formal poster presentations.</li> <li>Coffee break refreshments and lunches will be provided for all registrants in a common space to foster informal collaboration, networking and exchange of scientific information and ideas. These communal meals will include food options geared toward young children.</li> </ul>	<ul style="list-style-type: none"> <li>This session is being organized by the IRPCM team for Clinical Aspects of Human Mycoplasmas</li> <li>Credit for 3 hours of Continuing Medical Education (CME) will be offered for attendance</li> <li>The keynote lecture will feature aspects of novel antimicrobial therapies, and the award lecture will feature resistance patterns and co-infections unique to the rapidly emerging non-gonococcal urethritis agent <i>Mycoplasma genitalium</i></li> </ul>	

Also don't forget to register soon to get the early bird registrations fee prices and to book your hotel accommodations before June

Best wishes,



Meghan May  
Chair, Local Organizing Committee



## *IOM Awardees giving lectures at IOM 2018:*

**Emmy Klieneberger-Nobel Award: Joachim Frey (Switzerland)**- for outstanding research in Mycoplasmology



Joachim Frey, studied chemistry and biochemistry at the Universities of Geneva (Switzerland) and Uppsala (Sweden). He earned his PhD at the University of Geneva 1980 on the origin of DNA replication. He worked as a research fellow at the Max Planck Institute Berlin and subsequently at University of Geneva on plasmid incompatibility and genetic engineering techniques. In 1986 he acted as invited professor at the Université du Québec à Montréal, Canada. Since 1987 he leads the research activities at the Institute of Veterinary Bacteriology, University of Bern where he got nominated full professor and director of the institute in 2000.

His research centres on host pathogen interactions of bacterial animal pathogens. He worked on several Mycoplasma species and unravelled the role of glycerol uptake and metabolism as a major virulence attribute of *Mycoplasma mycoides* subsp. *mycoides* via production and translocation of H<sub>2</sub>O<sub>2</sub> and oxygen radicals to host cells. He detected RTX toxins as primary virulence factors of *Actinobacillus pleuropneumoniae* and was involved in the development of a successfully commercialized vaccine against porcine actinobacillosis. In *Aeromonas salmonicida* causing furunculosis in salmon trout and char, he detected type III secretion as central virulence attribute. His research also includes molecular epidemiology of *Bacillus anthracis* and *Francisella tularensis*. From 1995 to 2016 he was member of the Swiss Federal Commission of Biological Safety. He was nominated honorary professor of the National University of Singapore and the Jiangsu Academy of Agricultural Sciences Nanjing China.

Frey attended his first IOM congress in 1988 in Baden bei Wien (Austria) which motivated him to join IOM. He was chair of IOM, from 2010 - 2012, is member of the International Committee on Systematics of Prokaryotes.

**Derrick Edward Award: Rohini Chopra-Dewasthaly (Austria)** -- for outstanding research in Mycoplasmology by a young investigator



Having obtained her PhD in yeast genetics and molecular biology (in Dec 2001, from CSIR-IMTech, India), she did not imagine that genetic manipulations in mycoplasmas, the small simple prokaryotes, could be so challenging during her PostDoc project! After having successfully established the first potential tools and techniques for the genetic manipulation of *M. agalactiae* and *M. bovis*, the main research objective was to better understand the molecular basis of *M. agalactiae* pathogenicity, mainly (i) by identifying its infection-related genes, and (ii) by studying the role of the Vpma antigenic variation system to get valuable insights into the dynamic behavior of mycoplasma populations causing persistent chronic infections. To this effect, construction of 'phase-locked' mutants (PLMs) was an important breakthrough in mycoplasmology (*resulting in the Louis Dienes award at the IOM Congress in Cambridge in 2006!*) to dissect and understand the biological significance of large multigene families devoted to phase variation. Several *in vitro* and *in vivo* studies with these

PLMs revealed new facets of *M. agalactiae* antigenic variation system and clearly established its importance for the in-host survival and persistence of the pathogen, besides establishing the Vpmas as ‘immune evasion proteins’ with a novel role as major cytoadhesins leading to differential infection potential of the variants. Additional extramural research grants concentrated on successful identification of genes essential for host colonization and for systemic spreading by negative selection of transposon mutants in the sheep infection model. Currently, Rohini is trying to understand the host responses associated with *M. agalactiae* infections and to study host-pathogen interactions at molecular cellular level. Rohini was also a member of Scientific Program Committee from 2010-2012 (19<sup>th</sup> IOM Congress) and from 2016-2018 (22<sup>nd</sup> IOM Congress) .

**Peter Hannan Award: Lisa Manhart (USA)** -- for outstanding research in applied clinical Mycoplasmaology



Lisa Manhart’s research interests lie in the field of sexually transmitted infections (STI) and sexual risk behavior, with a specific focus on the epidemiology of *Mycoplasma genitalium*. Her work includes studies that have contributed to establishing *M. genitalium* as a sexually transmitted pathogen, demonstrating associations with female reproductive tract disease syndromes, and highlighting challenges with emerging antimicrobial resistance. In addition to her work on *M. genitalium*, she maintains a research portfolio studying sexual risk behavior, the role of the male genital tract microbiome in STI syndromes, and other specific STI pathogens including *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, and human papillomavirus.

**Robert F. Whitcomb Award: Yan Zhao (USA)** – for outstanding research in plant and insect Mycoplasmaology



Yan Zhao’s work is centred on phytoplasmas, which are genetically related to mycoplasmas that infect human and animals; but phytoplasmas infect only plants and a special group of insects. Phytoplasmas are responsible for numerous plant diseases that impact agriculture and our environment. His research is focused on two major areas: Detection and identification of diverse phytoplasmas; using genome information and DNA fingerprinting technology, he has identified genetic markers that can distinguish different phytoplasmas and constructed an online tool, *iPhyClassifier*. The second focal point of his research is identification of molecular targets for disease control, since phytoplasmal infection can subvert the master plan of the development of a host plant by changing the properties of plant stem cells, he has aided in constructing a model to explain how a pathogen can redefine the destiny of plant stem cells. He is hopeful that our findings will shed light on eventual discovery of molecular targets for combating phytoplasmal diseases.

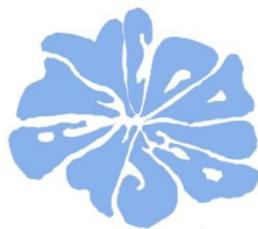
***WHAT'S IN A NAME? Are we to become malacoplasmatologists or mycoplasmatologists studying mycoplasmatosis? – Nomenclature update from DAN BROWN***

The International Committee on Systematics of Prokaryotes' Subcommittee on the Taxonomy of Mollicutes will hold a closed meeting on Sunday, July 8<sup>th</sup> at the Sheraton Harborside. A lively discussion of a recently published proposal to revise the taxonomy and nomenclature of the Mollicutes is expected. If this is taken seriously, some of our favorite species will become *Metamykoplasma hominis*, *Mycoplasma pneumoniae*, or *Mycoplasma synoviae*, and a revised name for the IOM itself may be necessary. A summary of the discussion will be presented at the closing session of the Congress.

The original article inciting these discussions in the journal *Antonie van Leeuwenhoek* can be found at the link:

<https://link.springer.com/article/10.1007%2Fs10482-018-1047-3>

***UPCOMING MEETINGS (ASIA): – Tokyo, Japan May 18-20, 2018***



The Japanese Society of Mycoplasmatology



**The joint congress of 7th Meeting of Asian Organization of Mycoplasmatology (7th AOM) and 45th Annual Meeting of Japanese Society of Mycoplasmatology (45th JSM) will be held in Tokyo, Japan on May 18-20, 2018. The meeting is being hosted by Dr. Shigeru Kamiya of Kyorin University (7th AOM) and Dr. Tsuyoshi Kenri of National Institute of Infectious Diseases (45th JSM). About 250 attendees are expected including investigators as well as postdocs and students. The meeting website will be open soon. For more information, please e-mail: [skamiya@ks.kyorin-u.ac.jp](mailto:skamiya@ks.kyorin-u.ac.jp) or [kenri@nih.go.jp](mailto:kenri@nih.go.jp).**



ESGMI

ESCMID STUDY GROUP  
FOR MYCOPLASMA INFECTIONS

European Society of Clinical Microbiology and Infectious Diseases

The Executive board of ESGMI was pleased to announce that they will participate as a group in other congresses, most notably an ESGMI meeting and human mycoplasma session at the 22nd IOM congress in Portsmouth, a human and animal mycoplasma antimicrobial resistance session at ICOHAR conference 2019 and are in the planning stages for a joint meeting ESGMI/SFAM regarding human and veterinary mycoplasmas 2019 in London, UK. The executive committee also received 5 student award applications and awarded all with €500 as long as they all meet the eligibility criteria of ESGMI membership. Progress on multi-centre diagnostic studies on *M. pneumoniae* and *M. genitalium* were also updated.

For anyone interested in becoming involved in this study group, please e-mail Ran Nir-Paz (Chair) ([nirpaz@hadassah.org.il](mailto:nirpaz@hadassah.org.il)) or Roger Dumke (secretary) ([roger.dumke@tu-dresden.de](mailto:roger.dumke@tu-dresden.de)).

### *READER'S Corner: – Frank Bastian*

Although retired, Frank continues to bring Mycoplasmas back into the spotlight and this is his latest exciting proffering to the newsletter:

#### **Novel Spiroplasma Spp. Cultured From Brains and Lymph Nodes From Ruminants Affected With Transmissible Spongiform Encephalopathy.**

[Bastian FO](#), [Lynch J](#), [Hagius S](#), [Wu X](#), [McCormick G](#), [Luther DG](#), and [Elzer PH](#). [J Neuropathol Exp Neurol](#). 2018 Jan 1;77(1):64-73. doi: 10.1093/jnen/nlx102.

#### **Abstract**

Spiroplasma spp., tiny filterable wall-less bacteria, are consistently associated with the transmissible spongiform encephalopathies (TSE). Spiral forms have been transiently isolated from TSE-affected brain tissues in SP4 growth media designed for isolation of Spiroplasma spp., but the isolate could not be propagated in SP4 media. A bacterium must grow in vitro in cell-free cultures to allow full characterization of a suspect pathogen. Here, a novel Spiroplasma sp. was isolated from scrapie- and chronic wasting disease (CWD)-affected brains and lymph nodes. Filtrates of tissue homogenates inoculated into Brucella media incubated for 14 days at 35 °C resulted in high titers of spiroplasma as shown by dark-field microscopy. A drop assay of infected media on Bacto Schaedler agar showed spiroplasma isolates forming unique subsurface colonies after 21 days incubation. Spiroplasma coils, coccoid forms and clumps of entwined spiroplasma filaments were seen on the agar by scanning electron microscopy. Since Brucella media has a sodium bisulfite additive that lowers oxygen tension, TSE spiroplasma growth requires media with low oxygen tension. Brucella media allows for isolation and propagation of spiroplasma from TSE-affected tissues, which will lead to complete characterization of this TSE pathogen and determine its role as a candidate causative agent of TSE.

[10.1093/jnen/nlx102](https://doi.org/10.1093/jnen/nlx102)

*TREASURER'S REPORT – Gail Gasparich:*

**International Organization for Mycoplasma**  
**Treasurer's Report**  
**First Quarter 2018**  
**1/1/2018-3/28/2018**

**Cash Balance at the Beginning of the Period:** \$29,069.22-29,064.22 (Checking Account) + \$5.00 (Savings Account)

**Income Received During the Period Covered:** \$20,000 transfer from PayPal Account; \$2980 Wire Transfer for Mycoplasma Experience Sponsorship; \$516 Wire Transfer for meeting and reception for Holger Linck; \$100 Wire Transfer for Guido Ruggero Loria.

**Expenses Paid During the Period Covered:** \$500 for IOM Meeting Banquet Deposit; \$5000 for IOM Meeting Sheraton; \$100 IUMS Annual Membership and Wire Transfer Fee; \$61 Fee for Wire Transfers

**Cash Balance at the End of the Period Covered:** \$47,004.22-\$46,999.22 (Checking Account) + \$5.00 (Savings Account)

**Financial Issues for 2016-2017:**

Transition to new Treasurer

IOM Sponsors: Mycoplasma Experience and SpeedX

**Additional Investment Account Updates:** Total \$109,445.97

Vanguard Admiral Treasury Money Market Fund \$5,335.34

Vanguard Short-Term Federal Fund Admiral Shares \$73,030.10

Vanguard Short-Term Treasury Fund Investor Shares \$31,080.53

December 31, 2017 Balance was \$109,927.45 so quarterly change was a decrease of \$481.48.

**Information on current membership:** My database shows 275 current members paid through 2016 or beyond.

Respectfully Submitted by Gail E. Gasparich, Ph.D.



3/28/2018

**International Organization for Mycoplasma**  
**Treasurer's Report**  
**Annual Summary for 2017**  
**1/1/2017-12/31/2017**

**Cash Balance at the Beginning of the Year:** \$16,931.42-\$16,926.42 (Checking Account) + \$5.00 (Savings Account)

**Income Received During the Period Covered:** \$16,247.43

\$7,500 transfer from PayPal; \$1,000 payment from Roche Molecular for Antisera; \$7,747.43 overage from 2016 IOM Meeting

**Expenses Paid During the Period Covered:** \$4109.63

\$395.23 FedEx charge for antisera shipment; \$119.40 reimbursement to Chris Minion for IOM Website, \$245 IUMS 2016 and 2017 Membership Dues and wire transfer cost; \$3,350 to pay CTI for IOM Meeting

**Cash Balance at the End of the Period Covered:** \$29,419.22-\$29,064.22 (Checking Account) + \$5.00 (Savings Account)

**Financial Issues for 2016-2017:**

A check for \$5,000 to open the account has been sent but not deposited yet.

IOM Sponsors: Mycoplasma Experience, Speedx, and Diasorin (pending payment)

**Additional Investment Account Updates:** Total \$109,927.45

Vanguard Admiral Treasury Money Market Fund \$5,324.21

Vanguard Short-Term Federal Fund Admiral Shares \$73,389.22

Vanguard Short-Term Treasury Fund Investor Shares \$31,214.02

December 31, 2016 balance was \$109,214.33 so annual change was an increase of \$713.12.

**Information on current membership:** My database shows 215 current members paid through 2016 or beyond

Respectfully Submitted by Gail E. Gasparich, Ph.D., IOM Treasurer



12/31/2017