Starting 2018 with a microbial bang: Recognizing scientific excellence

Happy New Year! We are delighted to welcome you into the New Year by sharing the outstanding achievements from those in the FEMS community. Here’s to another eventful year of putting microbiology firmly on the map.

Meet FEMS Vice-President: Professor Hilary Lappin-Scott

We are extremely proud to announce that our Vice-President, Prof Hilary Lappin-Scott, was awarded an Order of the British Empire (OBE) in the 2018 New Year’s Honours list for her services to microbiology and the advancement of women in science and engineering.

Hilary is an eminent microbiologist who has dedicated much of her career to understanding biofilm communities and in advancing science for all. She is actively involved in the science community in various ways:

- **Advancing science** FEMS Vice-President since 2016 and Senior Pro-Vice Chancellor of Swansea University, United Kingdom
- **Science Academies** Fellow of the American Academy of Microbiology, the Royal Society of Biology and the European Academy of Microbiology (EAM)
- **Campaigner for women in science** Leads the Athena Scientific Women’s Academic Network at Swansea University, Board member of the Equality Challenge Unit, advises Australian Universities and Research institutes on best practice on supporting women in science, technology, engineering, and math (STEM) and is advisor to the Canadian Science Minister
- **Awards** Women into Science and Engineering (WISE) HERO award 2016, STEM ‘Pioneer’ Award 2017, Womenspire Award 2017

Meet Hilary Lappin-Scott

We are thankful to work with such an inspiring network of microbiologists, campaigners and thought leaders across the globe.

Prof Hilary-Lappin-Scott is the Vice-President of FEMS, a microbiology expert in microbial biofilms and a committed campaigner for promoting women in science.

Here’s to another eventful year for microbiology!

Read Hilary’s blog >

Watch Hilary’s TEDXTalk >
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Meet FEMS Microbiology Letters 2017 MiniReview Award winner

We are delighted to announce the winning MiniReview article for the 2017 FEMS Microbiology Letters MiniReview Award:

**Autotrophic microbial arsenotrophy in arsenic-rich soda lakes**

Authors: Ronald S. Oremland, Chad W. Saltikov, John F. Stolz, James T. Hollibaugh

This exciting award is a joint effort between FEMS Microbiology Letters and Oxford University Press (OUP) to recognize the inspiring collaborative work being carried out in multidisciplinary research. It is open to all authors submitting a MiniReview to FEMS Microbiology Letters with the winning MiniReview selected by the journal’s Editorial Board at the end of the year.

The winning MiniReview author(s) receive a €1,000 award, free access to their article, plus special marketing attention for their article from both OUP and FEMS.

We caught up with the lead author of the winning MiniReview of 2017, Dr Ronald S. Oremland:

“We have been working on aspects of the microbial biogeochemistry of soda lakes in the western USA for nearly four decades. These are just inherently interesting, extreme environments, places one doesn’t usually think that can teem with microbial and invertebrate life. For the past 20 years we have focused on the microbes in these lakes that make a living by carrying out redox transformations of the toxic element arsenic, which these lakes are particularly well-endowed... When asked to contribute to a FEMS issue along the lines of the winning article, it was easy to write something that focused on arsenotrophy, as many of these critters are chemo- or photo-autotrophs.”

To get involved in this year’s MiniReview Award, please contact the relevant Section Editor from FEMS Microbiology Letters. We look forward to reading your MiniReviews!

Last call for nominations

We are looking for dynamic people to get involved in the governance of FEMS to encourage the right attitudes, relationships and values, as well as demonstrate leadership, integrity, accountability and sound judgement.

If this sounds like you or someone that you know, we invite you to submit a Directorship nomination. This is the last call for nominations! The deadline for all nominations is 31 January 2018.

Out now: Microbiome and Microbial Communities Virtual Special Issue

Microbial communities inhabit almost all ecological niches, ranging from the human gut to soils. Understanding the genetic make-up of these microbial communities, otherwise known as the microbiome, can give valuable insight into the complex ecosystems formed by these communities.

We are delighted to announce a new Virtual Special Issue on Microbiome and Microbial Communities from FEMS Microbiology Reviews. This Virtual Special Issue is guest edited by Philippe Sansonetti, an eminent microbiologist who is the President of the European Academy of Microbiology (EAM) and who was awarded the FEMS-Lwoff Award in 2000 for his outstanding contribution to microbiology.

Nominate your microbiology hero for the FEMS-Lwoff Award

Do you know a group or an individual that has provided outstanding service to microbiology in Europe?

Has their research had a societal impact that deserves recognition? In other words, are they your scientific heroes?

Then why not nominate them for the FEMS-Lwoff Award! Anyone in the field of microbiology (societies, groups or individuals) may nominate a candidate for the prestigious FEMS-Lwoff Award. The selected Awardees will be awarded at the next FEMS Congress in 2019, as well as asked to write an article for one of our journals to showcase the impact of their research.

You have until 10 March 2018 to nominate your microbiology hero for the FEMS-Lwoff Award. We look forward to hearing about them!

Out now: Inland Aquatic Ecosystems Thematic Issue

Look underneath the surface and you’ll find an abundance of diverse microbial communities in inland aquatic environments — such as lakes, rivers, ponds, wetlands and reservoirs. These microbial ecosystems contribute significantly to maintaining and regulating the global flux of energy and to sustaining life on our planet.

To showcase the current developments in inland aquatic ecosystems from key climate researchers, we are delighted to announce a new Thematic Issue from FEMS Microbiology Ecology. Guest edited by Hongchen Jiang, Yongqin Liu and Gary King.

Looking back on 2017 FEMS Journals poster prize winners

Last year we awarded several FEMS Journal poster prizes to recognize the outstanding research presented by early career scientists at the following FEMS-sponsored meetings:

- MiCROPe (Microbe Assisted Crop Production)
- International Society for Subsurface Microbiology
- Polar and Alpine Microbiology 2017
- Eurobiofilms 2017
- 33rd International Specialised Symposium on Yeast (ISSY)
- 12th International Meeting on Yeast Apoptosis (IMYA12)
- Advanced Lecture Course: Molecular Mechanisms of Host-Pathogens Interactions and Virulence in Human Fungal Pathogens (HPF2017)

We congratulate all FEMS Journal poster prize winners and look forward to seeing more exciting research this year!
**PUBLICATIONS**

**FEMS Microbiology Reviews**

**Review**

Environmental factors influencing the development and spread of antibiotic resistance

This review defines which ecological and environmental factors are important for the development of antibiotic resistance in human pathogens, and suggests some possible mitigation strategies to delay and reduce increased resistance.

Authors: Bengtsson-Palme, Kristiansson and Larsson

[DOI: doi.org/10.1093/femsre/fux053 >]

**FEMS Microbiology Letters**

**MiniReview**

Interdisciplinary STEM education reform: dishing out art in a microbiology laboratory

Visual art can engage students in ways that can have important downstream effects on scientific discovery. This review looks at how integrating visual art into science education, like using agar art in a microbiology classroom, is a novel way to help turn science students into scientists.

Authors: Adkins, Rock and Morris

[DOI: doi.org/10.1093/femsle/fnx245 >]

**Pathogens and Disease**

**Research Article**

*Chlamydia trachomatis* plasmid-encoded protein pORF5 protects mitochondrial function by inducing mitophagy and increasing HMGB1 expression

The authors find that the plasmid-encoded protein pORF5 from the obligate intracellular pathogen, *Chlamydia trachomatis* increased mitophagy and inhibited apoptosis by up-regulating HMGB1 expression.

Authors: Lei et al.

[DOI: doi.org/10.1093/femspd/ftx111 >]

**FEMS Yeast Research**

**Research Article**

A CRISPR/Cas9-based exploration into the elusive mechanism for lactate export in *Saccharomyces cerevisiae*

CRISPR/Cas9-based genome editing allows rapid, simultaneous modification of multiple genetic loci in *Saccharomyces cerevisiae*. Here, this technique was used in a functional analysis study aimed at identifying the hitherto unknown mechanism of lactate export in this yeast.

Authors: Mans et al.

[DOI: doi.org/10.1093/femysd/fox085 >]

**FEMS Microbiology Ecology**

**MiniReview**

Exploring fish microbial communities to mitigate emerging diseases in aquaculture

Aquaculture is the fastest growing animal food sector worldwide and expected to further increase to feed the growing human population. This review describes insights in the diversity and functions of the fish bacterial communities elucidated with next-generation sequencing.

Authors: Bruijn et al.

[DOI: doi.org/10.1093/femsec/ftx161 >]

**Welcoming new editor to FEMS Microbiology Reviews**

We are delighted to welcome Prof Justin Nodwell as a new editor for FEMS Microbiology Reviews.

As the Chair of Biochemistry at the University of Toronto, Canada, Prof Justin Nodwell is a specialist in antibiotic discovery and research. His laboratory use chemical genomics for discovering and elucidating the mechanisms of action of antibiotics against prokaryotic and eukaryotic organisms. We look forward to working with Prof Justin Nodwell!

Find out more about Justin Nodwell >
GRANTS CORNER

Zsófia Csáky

Grant: FEMS Research and Training Grant
Host lab: Prof. Roger Schneiter, University of Fribourg, Switzerland
FEMS Member Society: Czechoslovak Society for Microbiology

Zsófia Csáky is a PhD researcher currently looking into the lipid biochemistry and genetics of the yeast Saccharomyces cerevisiae at the Slovak Academy of Sciences.

“My name is Zsófia Csáky, I am a PhD student at the Slovak Academy of Sciences. In my PhD program I focus on the lipid biochemistry and genetics of the yeast Saccharomyces cerevisiae, more precisely I would like to understand an important phenomenon known as lipotoxicity.

Thanks to FEMS Research and Training grant, I got an opportunity to stay at Prof Roger Scheniter’s lab at the University of Fribourg in Switzerland. During my stay I was working in an excellent laboratory, where I learned a lot of new techniques and I could extend my knowledge about the yeast lipid metabolism. This grant made possible a collaboration, which helped me to move our research forward and I will be always grateful to FEMS to have this useful experience.”

More info on FEMS Grants >
Learn how to join a FEMS Member Society >
Learn more about the Czechoslovak Society for Microbiology >

OPPORTUNITIES

Post on our Opportunities Board!

Do you want to promote your event, job, funding or interesting projects on our website to the wider microbiology community?

You can do this on our Opportunities Board! Here you can find FEMS-sponsored events and funding, as well as many other exciting jobs, events, courses, resources and funding opportunities from the microbiology community.

Adding your opportunity on our Opportunities Board is easy! All you have to do is register for a free FEMS account and follow our Contributor Guide and video guide to create and share your opportunity to the wider microbiology community on our website.

FEMS-sponsored meeting of the month

14th European Conference on Fungal Genetics (ECFG14)
Location: Haifa, Israel
Dates: 25-28 February 2018

More info on this meeting >

Job of the month

3 PhD positions at the the Center for Electromicrobiology (CEM)
Location: Aarhus University, Denmark
Application deadline: 1 February 2018
The Center for Electromicrobiology (CEM) at Aarhus University is a newly established Center of Excellence.

The PhD projects will address:
• the molecular and structural biology of electrically-conductive proteins
• functional genomics and microbial physiology of electron-conducting microbes
• and/or the microbial biogeochemistry and interactions in electric microbial communities, depending on the qualifications and research interests of the successful candidates.

More info on how to apply >
Researchers have identified genes encoding a previously undiscovered version of the botulinum neurotoxin in bacteria from a cow’s gut. This is the first time that an intact cluster of genes for making botulinum neurotoxin have been found outside of the bacterium *Clostridium botulinum* or its close relatives, and only the second report of a new botulinum toxin in the past 40 years.

Source: Science Daily

**Future of new antibiotics >**

No new class of antibiotic has been discovered in 40 years, but researchers have now developed a method for rapidly screening hundreds of thousands of potential drugs for fighting infections. The method involves engineering bacteria to produce and test molecules that are potentially toxic to themselves.

Source: Science Daily

**Introducing the stingray soft robot >**

Researchers have developed a tissue-based soft robot that mimics the biomechanics of a stingray. The new technology could lead to advances in bio-inspired robotics, regenerative medicine and medical diagnostics.

Source: Science Daily

Could this be the most deadly animal on the planet?