

## Short report of the 2021 General meeting of BSM

The Belgian Society for Microbiology (BSM) is a nonprofit association dedicated to the advancement of microbiological sciences in the broadest sense. It was founded in 1996 to give all the microbiologists in Belgium a chance to meet and discuss Science in a friendly atmosphere. Since then, the Society successfully organized more than twenty Symposia devoted to specific and trendy topics that attracted from year to year between 110 and 200 participants.

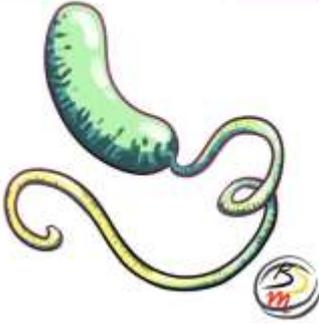
In 2017, on the occasion of the 20th anniversary of the creation of the Society, the Board decided to move one step forward and to create scientific sections to foster more contacts and activities among the members. Three have been created: (A) General Microbiology, (B) Applied and Environmental Microbiology and (C) Host-microbe interactions

In line with this new structure, we are organising a general meeting with a prominent speaker chosen by every section. For section A, the keynote speaker was Christian Lesterlin, who gave a talk on the visualization of acquisition and establishment of drug resistance in bacteria. Daniele Daffonchio was invited by section B and presented the stratified microbial network in the anaerobic deep-sea brine pools of the Red Sea. Finally, Maximiliano Gutierrez (section C) explained the relation between the host cell environments and antibiotic efficacy in tuberculosis. The BSM always encourages young people to present their work and 15 young academics were selected to give a talk (see program). The symposium is always closed by an honorary lecture: a Belgian microbiologist. This year, Marc Van Ranst was selected for his contribution to the Covid 19 pandemic management and for his communication efforts to explain the pandemic to the broader public.

This online 2021 General meeting of BSM was held on March 12. Over 250 participants were present. Half of the participants were PhD students.

President Eveline Peeters explaining the program

Microbial resources and challenges for science and society



Microbial resources and challenges for science and society

**It is challenging to perform (microbiology) research when a society is affected by a pandemic**

*Quorum sensing – stay in contact with each other*

*Biofilm formation – set up collaborations*

*Public goods – contribute with your knowledge*

*Enhanced traits – acquire new skills*



Credits for the idea: Dr Beatriz Basega Carvera #FIMSmicroblog



The agar art contest. At the end of the conference, the public can vote for the best submission

**Agar art contest**



**BSM agar art contest**

Please cast your vote for your favourite agar art entry

1. Hanne Debergh
2. Max Dekeukeleire
3. Valérie Mattelin
4. Josefien Van Landuyt
5. Renske van Raaphorst
6. Sebastian Worms



And the winner is:



President Eveline Peeters acknowledging ISME for the financial support

The slide displays the ISME logo, which consists of a green globe icon followed by the letters "ISME" in a large, bold, black font. Below the logo, the text "International Society of Microbial Ecology" is written in a smaller font. The website address "https://www.isme-microbes.org" is provided. A list of bullet points describes the organization's mission and activities. To the right of the text, the name of the Belgian Ambassador, Charles Van der Henst, and his affiliation with the VIB-VUB Center for Structural Biology are listed. A video feed of a woman with dark hair, wearing a headset, is visible on the right side of the slide.

**ISME**  
International Society  
of Microbial Ecology

<https://www.isme-microbes.org>

- A non-profit association in the field of Microbial Ecology
- Main goal: to promote Microbial Ecology in all aspects
- Symposia every two years: 2200 people on average, representing over 50 countries
- Two journals: ISME Journal & ISME Communications (freshly launched)
- Funding / Sponsorship: contact: [charles.vanderhenst@vub.vib.be](mailto:charles.vanderhenst@vub.vib.be)

Belgian Ambassador:  
Charles Van der Henst  
VIB-VUB Center for Structural Biology

## Acknowledgments

- All speakers
- All BSM Board members
- ISME
- BigMarker



First keynote lecture of Christian Lesterlin

The slide displays the title "DNA transfer by conjugation in live cells" at the top. Below the title is a diagram of two bacterial cells, one labeled "Donor" and the other "Recipient", connected by a red line representing a conjugative pilus. A circular logo with the letters "B" and "M" is positioned below the diagram. At the bottom of the slide, it reads "BM Symposium 13/04/2021" and "Christian LESTERLIN, Leibniz DSM transfer lab". The video conference interface shows two participants: a woman in the top window and a man in the bottom window.

Second keynote lecture of Daniele Daffonchio

The slide features the title "The stratified microbial network in the anaerobic deep-sea brine pools of the Red Sea" in white text on a black background. Below the title is the name "Daniele Daffonchio" and his affiliation: "Extreme Systems Microbiology Lab, Red Sea Research Center". A logo for the Red Sea Research Center is shown, along with the location "Thuwal, Saudi Arabia". Contact information is provided at the bottom: "daniele.daffonchio@ksu.edu.sa" and "http://www.ksu.edu.sa/en/study/faculty/daniele-daffonchio". The video conference interface shows two participants: a man in the top window and Daniele Daffonchio in the bottom window.

Third keynote lecture of Maximiliano Gutierrez

The slide has a dark background with a 3D visualization of a host cell environment in red and blue. The title "Host cell environments and antibiotic efficacy in tuberculosis" is at the top. The logo for "THE FRANCIS CRICK INSTITUTE" is in the top right corner. Below the visualization, it says "Belgian Society of Microbiology, 12th March 2021" and "Maximiliano G. Gutierrez". At the bottom, it reads "Host-Pathogen Interactions in Tuberculosis Laboratory" and "The Francis Crick Institute, London, UK". The video conference interface shows two participants: a man in the top window and another man in the bottom window.



Some screenshots from the PhD students presenting their work

**Analysis of *Campylobacter* isolates**

- 1. Campylobacter 2019 (n=10)
- 2. Campylobacter 2018 (n=10)
- 3. Campylobacter 2017 (n=10)
- 4. Campylobacter 2016 (n=10)
- 5. Campylobacter 2015 (n=10)

Dr. [Name] | [Institution]

**The L-Glutamate-γ-P<sub>i</sub> phosphino group is a biosister of carboxyl group**

Background of L-Glutamate-γ-P<sub>i</sub> phosphino group

Supporting literature: [Citation]

Dr. [Name] | [Institution]

**FT-IR Spectroscopy: Why?**

Photo image during on-site analysis | Photo image before on-site analysis

- Fast, easy and cost-effective method compared to Quelling and WGS!

scienis&co | be

**How a WW2 shipwreck still influences the surrounding sediment 70 years later**

JOSEFEN VAN LANDUYT<sup>1</sup>, KANKANA KUNDU<sup>1</sup>, SVEN VAN HAELEST<sup>1</sup>, MARIJKE NEYTS<sup>1</sup>, KOEN PARMENTIER<sup>1</sup>, MAARITEN DE RUCKE<sup>1</sup>, NICCO BOON<sup>1</sup>

CHET - Universiteit Gent, Coupure links 303, 9000 Gent, Belgium  
 VUZ - Imhofflaan 16, Wareldestraat 7, 3400 Oostende, Belgium  
 CHM - Sibley 250x, Lievekensstraat 1, 9420 Oostende, Belgium

Dr. [Name] | [Institution]

**The key enzyme PhaC**

Bioinformatic approach

However ...

- All hits contained a 77kDa [sequence]
- ⇒ No classic PhaC sequence found in *T. thermophilus*

In extension to this ...

- ⇒ No classic PhaC sequence found in genomes of extreme thermophiles

Sequence driven analysis | ITRA-MASS spectrometry