ÖAW

The Young Academy Distinguished Lecture Series brings cutting-edge scholarship to the public, presented by distinguished experts and members of the Young Academy. This lecture will provide insights into the important role of cooperation between organisms in the biosphere, a concept that is, thanks to the groundbreaking work of Margaret McFall-Ngai and many others, now widely recognized.

ORGANIZER

Young Academy of the Austrian Academy of Sciences

CONTACT

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REGISTRATION

Please register using the QR code or visit
https://www.oeaw.ac.at/veranstaltungen/anmeldung/young-academy-distinguished-lecture-series

The event will be held in English.

Please note that photos and video recordings (image and sound) may be taken during the lecture.

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ÖAW Austrian Academy of Sciences

Young Academy Distinguished Lecture Series

The Invisible Force Revealed

Developing New Ways to Study the Microbial World Surrounding Us

Margaret McFall-Ngai, California Institute of Technology & Carnegie Science
Jillian Petersen, University of Vienna & Young Academy, OeAW
Oleg Simakov, University of Vienna & Young Academy, OeAW

Tuesday
21 Apr 2026
5:00 p.m.

Austrian Academy of Sciences,
Johannessaal
Dr. Ignaz Seipel-Platz 2
1010 Vienna

Symbiotic interactions form the foundation of biological systems. These most complex interactions span scales ranging from the human gut microbiome to global ocean communities. With the ever-increasing understanding of their importance in biodiversity, planetary, and human health, it is becoming crucial to understand symbiotic interactions in their intricate detail. Margaret McFall-Ngai's work was critical in transforming symbiosis research from a niche field of biology to global prominence in areas ranging from environmental science to medicine and human health. She pioneered the unique squid-vibrio model system of symbiosis together with collaborator Edward Ruby that has fostered over 30 years of research uncovering intricacies of how animals and bacteria interact for mutual benefit. She has uncovered how beneficial interactions between microbes and their host animal are realized at the molecular level, setting the stage for the understanding of much more complex systems, such as the human gut microbiome.

Margaret McFall-Ngai's laboratory at the California Institute of Technology & Carnegie Science studies the role of beneficial bacteria in health using the squid-vibrio model and the biochemical and molecular 'design' of tissues that interact with light. In addition, Margaret McFall-Ngai has been heavily involved in promoting microbiology as the cornerstone of the field of biology. She was a Moore Scholar at California Institute of Technology (2011–2013), a Guggenheim Fellow (2010), and an AD White Professor-at-Large at Cornell University (2010–2016). She is a member of the American Academy of Microbiology (2002), the American Academy of Arts and Sciences (2011), the National Academy of Sciences (2014) and received an HHMI Professorship.

Jillian Petersen is Professor at the Centre for Microbiology and Environmental Systems Science at the University of Vienna. She studied at the University of Queensland in Australia, and the Max Planck Institute for Marine Microbiology in Germany. Jillian Petersen is a member of the FWF Board ('Kuratorium'). She is Editor-in-Chief of *The ISME Journal* and a member of ISME's International Board. She obtained a highly competitive Vienna Research Group Grant (2014), ERC Starting (2018) and Consolidator (2023) Grants, and is part of the FWF-funded Cluster of Excellence 'Microbiomes Drive Planetary Health'.

Program

5.00 PM: Welcome Address

5.05 PM: Insight Lecture

Jillian Petersen, University of Vienna & Young Academy, OeAW

From the 'Balance of Nature' to the 'Survival of the Fittest' and Back Again

5.15 PM: Distinguished Lecture

Margaret McFall-Ngai, California Institute of Technology & Carnegie Science

A Technology-Driven Revolution Reveals Symbiosis as a Keystone Feature of Our Biosphere

5.50 PM: Panel Discussion, followed by Q&A

Moderation: Jillian Petersen and Oleg Simakov, University of Vienna & Young Academy, OeAW

6.20 PM: Reception