



ICBM – News #21

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Welcome to the 21st ICBM-Newsletter

Dear colleagues,

with our current newsletter, we would like to stay in touch with you and give you a brief overview of what has been happening at the ICBM in the recent months.

In the 21st issue of our newsletter, we report on current fields of research at the institute, such as the ocean microbiome, and look beyond the horizon of our various activities, such as the discovery days at Campus Wechloy. On September 10 + 11, the 2nd Oldenburg Climate Days "Climate, Man and Sea" will take place in the lecture hall center.

[Here](#) you can find the program and to the free registration.

We wish you a great start to the summer.

Best wishes and all the best,

Dr. Ferdinand Esser and Nadine Haake

Topics of this issue

Science

- The ocean microbiome
- University of Oldenburg competes for three Clusters of Excellence
- Microalgae with unusual cell biology
- Coral researchers receive EXIST start-up funding
- Marine bacteria team up to produce a vital vitamin
- "One feels like a true explorer"

Outside the box

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Congratulations

- An inspiring personality
- Markus Prinz wins Wilhelmshaven Science Slam

SCIENCE AT THE ICBM

The ocean microbiome

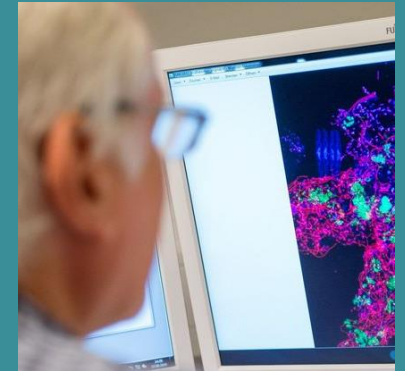
A group of bacteria lives in close association with other organisms throughout the world's oceans. Microbiologist Meinhard Simon and his team at the recently completed Collaborative Research Centre Roseobacter have spent 13 years investigating what makes these microbes so successful.

The sea is full of life. Even a thimbleful of water from the vastness of the ocean contains up to a million tiny creatures: Bacteria.

It is the size of these microscopic organisms that fascinates Prof. Dr Meinhard Simon: "Bacteria are the most abundant and diverse organisms." For the microbiologist, the interactions that microorganisms have with each other, with other living organisms and with their environment form "a world of its own". A finely woven world about which researchers now know much more than they did years ago, thanks in part to his work..

[...]

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Meinhard Simon and his research objects: To make marine microbes visible, the tiny organisms are stained with fluorescent dyes [©Daniel Schmidt]

University of Oldenburg competes for three Clusters of Excellence

The university was successful in the preliminary decision of the excellence competition with a proposal on animal navigation. The existing clusters in hearing research and marine research will apply for an extension.

In the second round of the Excellence Strategy of the German federal and state governments, the University of Oldenburg will apply for three Clusters of Excellence. In addition to two renewal proposals, the university can now also submit a new proposal: As announced today by the German Research Foundation (DFG) and the German Council of Science and Humanities (WR), the draft proposal for the NaviSense project, which deals with the navigational abilities of animals, has been positively evaluated by a panel of experts.

[...]

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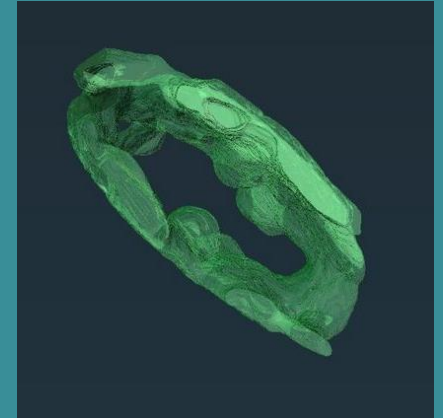
The question of how animals manage to navigate over long distances has long been a subject of research at the University of Oldenburg.
[©istock / AGD Beukhof]

Microalgae with unusual cell biology

What are the molecular processes in a unicellular marine algae species that can cause harmful algal blooms? A research team led by microbiologist Prof. Dr. Ralf Rabus from ICBM has conducted first detailed analyses of the unusual cell biology of *Prorocentrum cordatum*, a globally widespread species of the dinoflagellates group, using both advanced microscopic and proteomics approaches. As the team reports in the science journal *Plant Physiology*, the photosynthesis process in these microorganisms is organised in an unusual configuration which may help them to better adapt to the changing light conditions in the oceans. The results of the study could lead to an improved understanding of the incidence of harmful algal blooms, which may be becoming more frequent due to climate change.

[...]

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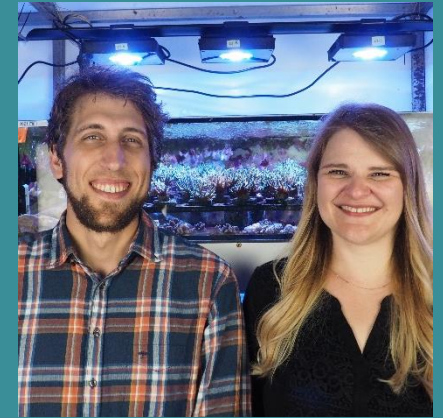


The researchers were able to reconstruct the three-dimensional shape of the chloroplast of the dinoflagellate *Prorocentrum cordatum* from several hundred cross-sectional [©WG General and Molecular Microbiology]

Coral researchers receive EXIST start-up funding

Start-up aims to make sustainable coral farming economically viable and better protect wild corals. Breeding corals in a sexual way, making the coral trade more sustainable and thus contributing to the protection of coral reefs: these are the goals of the start-up SciReef, which will emerge from a research transfer project. The project arose from the research activities of Dr. Samuel Nietzer and Dr. Mareen Möller in the Environmental Biochemistry working group at the Wilhelmshaven site of the ICBM. The Federal Ministry for Economic Affairs and Climate Protection (BMWK) and the European Social Fund (ESF Plus) will support the innovative start-up over the next two years with "EXIST Research Transfer" funding totaling around 920,000 euros. Prof. Dr. Peter Schupp, Professor of Environmental Biochemistry at the ICBM, will support the start-up as a scientific mentor. [...]

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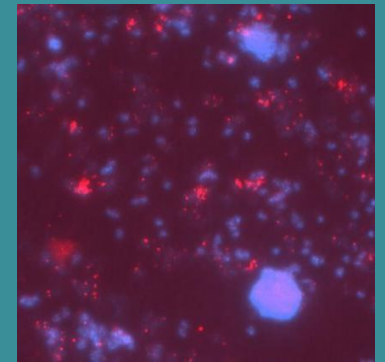
Dr. Samuel Nietzer and Dr. Mareen Möller have founded the company SciReef company [©Mareen Möller]

Marine bacteria team up to produce a vital vitamin

Two species of marine bacteria from the North Sea have established an unusual and sometimes destructive relationship to produce the important vitamin B12. This is reported by researchers from Oldenburg, Germany, and San Diego, US, in the journal Nature. The team's experiments show that the two microbial species have developed a coordinated strategy to obtain the scarce but essential vitamin.

A German-American research team led by microbiologist Dr Gerrit Wienhausen from the University of Oldenburg (Germany) has come an important step closer to a better understanding of highly complex interactions between marine microorganisms. The researchers conducted various experiments to analyse the interaction between two species of marine bacteria from the North Sea in the synthesis of vitamin B12, and have now published their findings in the scientific journal Nature. [...]

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Microscopic image of a co-culture of the two species of bacteria. The blue colouring shows bacteria, the red dots are viruses. They cause some bacterial cells to break up, releasing the vitamin into the water [© Wienhausen et al., Nature]

"One feels like a true explorer"

The oceans are home to much of the planet's biodiversity. They have a major influence on our climate and provide food for billions of people.

Since 2009, the United Nations has celebrated World Oceans Day on 8 June to draw attention to the oceans, which cover almost three-quarters of our planet. At the Universities of Oldenburg and Bremen, researchers from various disciplines are studying the ocean and how it is affected by global warming, for example. To mark World Oceans Day, researchers from both universities tell us what they are studying and why their research is important.

[...]

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Brittle stars are very valuable to the deep-sea ecosystem as waste recyclers. Here they are found with crinoids on a rock at a depth of 560 metres in the western Atlantic [© MARUM – Zentrum für Marine Umweltwissenschaften, Universität Bremen]

OUTSIDE THE BOX

On a Dutch bike in Taiwan

Luisa Fischer is studying environmental sciences at the University of Oldenburg and currently spending a semester on the island of Taiwan in the western Pacific. She's delighted with the interesting courses, the friendly people and the beautiful nature.

When Luisa Fischer is out and about on National Dong Hwa University's extensive campus in Hualien County, eastern Taiwan, she uses the same mode of transport as when she's at home in Oldenburg – a bicycle. A Dutch bicycle to be precise, which her Taiwanese buddy partner arranged for her to use during her six-month stay at the university. "There are only a few cars on campus, and scooters and motorbikes are not allowed on most of the roads, so cycling here is very pleasant," she explains.

[...]

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On an excursion, Luisa Fischer explored the Taroko National Park in eastern Taiwan. It is famous for its steep gorges and spectacular bridges
[©Luisa Fischer]

Discovery Days in Mathematics, Computing Science, and Natural Sciences

50 Years of Carl von Ossietzky University Oldenburg – 50 Years Open to New Approaches. From the very beginning, the natural sciences and mathematics have played a significant role in the development of Carl von Ossietzky University. Within the Discovery Days the School V - Mathematics and Natural Sciences opened its doors on the Wechloy campus.

Also our ICBM took part and we opened our doors and providing exciting insights into current marine research.

[...]

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School students from
Herbartgymnasium in
Oldenburg in the lab
[©ICBM]

CONGRATULATIONS

An inspiring personality

Doctoral candidate Adenike Adenaya has been awarded the DAAD prize for outstanding achievements by international students for the year 2023. Besides her academic research, she is committed to society in many different ways.

Outstanding, creative and well-organised – these are the words most often used to describe Adenike Adenaya by those who know and work with her. For her academic achievements and social commitment, she has now been honoured with the German Academic Exchange Service (DAAD) Prize for outstanding achievements of international students at the University of Oldenburg.

“I am very happy and grateful for the recognition,” says Adenaya, who is currently a doctoral candidate at the ICBM. “I also think that the prize is an encouragement for other international students to get involved,” she adds. [...]

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Adenike Adenaya, doctoral candidate at the Institute of Chemistry and Biology of the Marine Environment, has been awarded the DAAD Prize for outstanding achievements by international students for the year 2023. [©Daniel Schmidt]

Markus Prinz won Wilhelmshaven Science Slam

Landscape ecologist Dr. Markus Prinz was the winner of the latest Wilhelmshaven Science Slam, which took place yesterday at the Pumpwerk cultural centre. Prinz, a member of the Geoecology working group headed by PD Dr Holger Freund at the ICBM, explained to the audience in a ten-minute presentation that was as humorous as it was confident, that he was working on aliens. And one of them is the "Helmsü". He first introduced it to the audience as a greenish creature with several appendages.

[...]

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Dr. Markus Prinz wins the Science Slam in Wilhelmshaven
[©Sibet Riexinger]

If you have comments:

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Imprint

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