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Leopoldina Annual Assembly 2022

Global Health in an interconnected world

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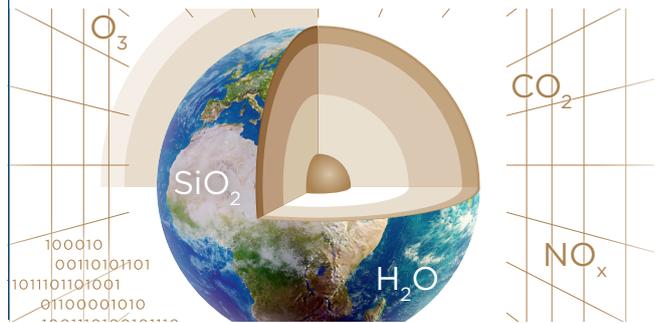
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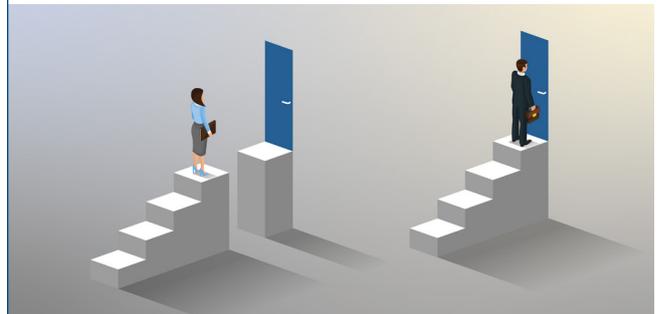
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The Leopoldina on Social Media



Editorial

Dear Members and Friends of the Leopoldina,

Global health is becoming more and more important in our increasingly interconnected world. The Leopoldina has been investigating global health since before the COVID-19 pandemic. Back in 2015 – partially in the wake of the 2014 Ebola outbreak – it emphasised the importance of public health and global health in a joint statement with acatech and the Union of German Academies. The Leopoldina has since created a section dedicated to global health. Together with the Veterinary Medicine section, the Global Health section has put together the programme for this year's Annual Assembly, "Global Health: From Health Services to Climate Change and to Social Justice", due to be held in Halle (Saale)/Germany on 23 and 24 September (from page 4).

Several of the statements published by the Leopoldina in recent years describe climate change and its impact on global health as one of the greatest challenges facing humanity. This is also reflected in this year's statements by the G7 science academies on matters relating to health and climate action. The "Earth System Science – Discovery, Diagnosis, and Solutions in Times of Global Change" Report on Tomorrow's Science, which was published in July, describes how research into the causes and consequences of climate change can be made more effective in the future (page 8). As part of this, it is hoped that more targeted measures will be found to counter the health risks associated with climate change.

A greater number of women need to be involved in science and research. The statement on women in science published in September examines the extent to which this long-held objective is being met, which obstacles women still face and how we can break down these barriers to entry (page 9). The Leopoldina will continue its commitment to improving support for women in science.

I hope you find this issue an interesting and inspiring read!



Prof. (ETHZ) Dr. Gerald Haug, President of the Leopoldina

Image: David Ausserhofer | Leopoldina

“Health issues must be considered in all areas of politics”

Leopoldina member Lothar H. Wieler on global health, the theme of this year’s Annual Assembly



Global health focuses on transnational challenges, such as the health effects of climate change. As set out in the third United Nations Sustainable Development Goal, the aim of global health is to ensure healthy lives and promote well-being for all.

Image: Feodora | AdobeStock

The Leopoldina Annual Assembly on Friday, 23 and Saturday, 24 September will shine the spotlight on global health, which is a concept that has gained greater significance as a result of the COVID-19 pandemic. But, according to Lothar H. Wieler ML – who prepared the programme for the event together with Susanne Hartmann ML and Thomas C. Mettenleiter ML – global health is about much more than pandemic preparedness.

What are the premises behind global health?

Lothar H. Wieler: Global health can be described as an interdisciplinary field working to improve human health

worldwide and to promote equal health opportunities for everyone. This is how my friend, the physician and epidemiologist

“The objective of global health is to minimise social, economic and environmental risks to health.”

Lothar H. Wieler,
Member of the Leopoldina

Jeffrey Koplan, a former director of the US public health agency Centers for Disease Control and Prevention (CDC),

defined it a few years ago. Instead of focusing on the individual, an important principle of global health is therefore to concentrate on transnational challenges, such as the health effects of climate change. In doing so, we can all learn from each other. The third United Nations Sustainable Development Goal, which strives to ensure healthy lives and promote well-being for everyone, also sums up the idea and mission behind global health very well.

One of the speakers at the Annual Assembly will be epidemiologist Mike Ryan, the Executive Director of the Health Emergencies Programme at the World Health

Organization (WHO). At the start of the COVID-19 pandemic in March 2020, he coined the now frequently quoted phrase “None of us is safe until all of us are safe”, calling on the world to think globally. Does this phrase apply to all matters concerning global health?

Wieler: I’m extremely glad that Mike Ryan will be joining us. His incisive phrase targets infectious diseases; however, it is just as relevant to many areas of global health, including social determinants of health. The message behind this phrase is that we all need to look out for and take care of each other, making it a great catchphrase for bringing our global community together.

The Annual Assembly’s first session will be dedicated to social determinants of health. Does this reflect just how important this issue is?

Wieler: Social determinants such as unemployment, education and living environments as well as supportive friends or other networks have a crucial impact on health behaviour. The COVID-19 pandemic indeed confirmed this.

In Germany, less educated people were twice as likely to become infected as compared to highly educated people. And during the second phase of the pandemic, mortality in low-income regions was 1.5 times higher than in prosperous regions. This clearly indicates the importance of ensuring equal living circumstances for everyone. The objective of global health is to minimise social, economic and environmental risks to health on both a national and an international level.

That is a big task. Where is the best place to start?

Wieler: International regulations have an important role to play. Global treaties like the WHO Framework Convention on Tobacco Control need to be drawn up in more areas. In order to reduce health risks, issues endangering health must be considered in all areas of politics. This approach is known as “health in all policies” and requires all political decisions to be made on the basis of whether they are beneficial to human health.



Lothar H. Wieler ML

President of the Robert Koch Institute and Acting Senator of the Leopoldina’s Global Health section, which created and prepared the programme for the Annual Assembly 2022 together with the Veterinary Medicine section.

Image: J. Reetz, Brauer Fotos | RKI

During the Annual Assembly’s opening address, you will discuss the lessons that the COVID-19 pandemic has taught us about global health. What are they?

Wieler: I find two of the lessons it taught us especially important. Firstly, when we compare countries around the world, it is evident that good, stable political leadership which enjoys the trust of the population is essential for handling crises like this. Unstable or corrupt systems are more likely to fall short of the mark.

The second lesson is that excellent public health is just as important as having an excellent healthcare system. Even here in Germany, it is essential to rethink public health and to strengthen the case for prevention. One way to achieve this is by sharing more knowledge about infection control. An even more important strategy is to raise awareness about the risk factors for chronic degenerative diseases to help people to protect themselves. Overall, we need to do more to give people the knowledge and ability to lead healthy lifestyles. Here the living conditions are of great importance.

Has the pandemic attracted more attention to the concept of global health?

Wieler: Pandemics make us more aware of just how connected and interdependent the world really is. This also became apparent during the Ebola pandemic in 2014 and 2015, which led to Germany developing its first global health strategy. However, global health efforts must not under any circumstances be limited to infectious diseases. There are broader challenges to tackle. The main disease burden is from chronic degenerative diseases like cancer, cardiovascular diseases and diabetes. While policymakers often only respond to acute crises, our job as scientists is to consider the causes of the burden of disease long-term, both objectively and strategically.

You are the Acting Senator of the Global Health section of the Leopoldina, which was established in 2020. How is it taking shape?

Wieler: The section is still at an early stage of development and currently has fewer than ten members. The Veterinary Medicine section helped us to organise the Annual Assembly, allowing us to put together a broad programme featuring international speakers.

Perhaps the event will encourage more Leopoldina members to join us. We hope to elect outstanding scientists for the section from areas important for global health such as health economics, health equity and mental health. After all the strength of our section is its interdisciplinarity.

What other plans do you have?

Wieler: We intend to organise workshops in collaboration with other national academies. And given how global health is increasingly being perceived as a political priority, we will certainly join working groups to contribute to statements for policymakers. If we can fully harness the power of the Leopoldina’s interdisciplinary potential, society as a whole will benefit the most from our work.

■ THE INTERVIEW WAS CONDUCTED BY ANNE BRÜNING



Annual Assembly on Global Health



Annual Assembly 2022 on Global Health

EARLY CAREER AWARD PRESENTED TO FRANCESCA SANTORO

When skin and nerve cells are damaged by injury or disease, innovative bioelectronics can play an important role in speeding up healing. Materials scientist and biomedical engineer Francesca Santoro receives the Leopoldina Early Career Award in recognition of her development



of bioelectronic materials capable of providing electrical stimulation to living cells. The award ceremony, which will include a speech by the scientist, will be held during the Annual Assembly.

During her PhD, Santoro began investigating the electrical activity of heart muscle and nerve cells and researched techniques to manufacture micro- and nanoscale 3D

structures. Due to their photovoltaic properties, the ultra-thin materials she developed do not require any batteries so can remain on the skin for weeks. In Germany Santoro has been leading research groups at RWTH Aachen University and the Forschungszentrum Jülich since the start of 2022. She is currently working on optimising the interfaces between nervous tissue and electronic microchips with the aim of creating biohybrid neuronal cells. The Early Career Award is financed by the Commerzbank Foundation with a prize of 30,000 euros. ■ LO

Image: Istituto Italiano di Tecnologia

► Early Career Award 2022

PROGRAMME

Friday, 23 September

9:00 am **Opening Ceremony**

10:30 am **Keynote Lecture „Health Equity in Times of a Pandemic“** with Mike Ryan (Geneva/Switzerland)

11:30 am Presentation of the **Early Career Award** und lecture by the Awardee

12:15 pm **Inaugural Lecture “The COVID-19-Pandemic: Lessons for Global Health”** with Lothar H. Wieler ML (Berlin/Germany)

2:30 pm **Session I “Social Determinants of Health”** with Clare Bamba (Newcastle upon Tyne/UK), Gabriele Stangl ML (Halle/Saale/Germany), Jürgen Margraf ML (Bochum/Germany)

5:00 pm **Session II “Health Economic Aspects”** with Aida Habtezion (New York/USA) and Seyed Hasnain ML (New Delhi/India)

8:15 pm **Evening Lecture “International Health Protection and Health Equity”** by Johanna Hanefeld (Berlin/Germany)

Saturday, 24 September

8:30 am **Session III “Health Systems Research”** with Irene Akua Agyepong (Accra/Ghana) and Juliet Bedford (Oxfordshire/UK)

10:30 am **Session IV “One Health – Complex Systems”** with Eva Rehfuess (Munich/Germany) and Thomas Wiegand ML (Berlin/Germany)

1:30 pm **Session IV “One Health – Infectious Diseases”** with Thomas C. Mettenleiter ML (Greifswald/Germany) and Susanne Hartmann ML (Berlin/Germany)

3:30 pm **Session IV “One Health – Mobility”** with Ibrahim Abubakar (London/UK) and Frauke Kraas ML (Cologne/Germany)

► Annual Assembly programme

Social justice in the spotlight

Evening lecture by social scientist Johanna Hanefeld

International networking will be crucial to achieve global health. In her evening lecture “International Health Protection and Health Equity” on Friday, 23 September at 8:15 pm, Johanna Hanefeld, a social scientist specialised in global aspects of public health, will explain why resilient public health systems are also indispensable to global health.

Hanefeld completed her academic education in the United Kingdom and has been a Professor of Global Health Policy at the London School of Hygiene & Tropical Medicine since 2012. As the Head of the Centre for International Health Protection, which was established at the Robert Koch Institute in Berlin/Germany in 2019, she can provide insights into the practical implementation of global health initiatives.

“Interest in global health is growing in Germany. However, it is still in its infancy, including in terms of its establishment as an academic discipline. The event at the Leopoldina will be an important milestone in the subject’s development here in Germany,” she says in anticipation of the Annual Assembly and its focus on global health. ■ AB

NEW MEMBERS OF CLASS I – MATHEMATICS, NATURAL SCIENCES AND ENGINEERING



In June, the new members of Class I – Mathematics, Natural Sciences and Engineering for 2019, 2020 and 2021 received their certificates. Pictured: Secretary-General Franziska Hornig (left) and Leopoldina President Gerald Haug ML (centre) and the new members Alessandra Buonanno ML, Joachim Maier ML, Johan Rockström ML, Armido Studer ML, Sami Haddadin ML, Ingo Krossing ML, Monika Ritsch-Marte ML, Joseph S. Francisco ML, Stefanie Dehnen ML, John P. Burrows ML, Kai-Uwe Hinrichs ML, Martin Stratmann ML, Susanne Crewell ML, Sibylle Günter ML (front), Eva Viehmann ML (back), Albrecht Schmidt ML and Helmut Dosch ML.

Image: Markus Scholz | Leopoldina

Funding for researchers from Ukraine

The Leopoldina has launched a special fellowship programme to provide support for Ukrainian scientists as an expression of solidarity with Ukraine. Scientists from Ukraine who have their careers in science endangered or interrupted by the war may apply for the Leopoldina Distinguished Fellow-

ship programme. The programme has been designed to enable post-doctoral level scientists to resume or continue their research activities.

The funding is person-related and designed for outstanding post-doctoral level scientists from Ukraine to work on an independent research project at

a university or research institution in Germany for an initial period of one year, while maintaining their affiliation at a Ukrainian institution. ■ JK

▶ Leopoldina Ukraine Distinguished Fellowship

NEW MEMBERS OF CLASS III – MEDICINE



In May, the new members of Class III – Medicine for 2019, 2020 and 2021 received their certificates. Pictured: Secretary-General Franziska Hornig (left) and Leopoldina President Gerald Haug ML (centre) and the new members – in the front row (from left to right): Christine Klein ML, Nicole Rotter ML, Juliane Winkelmann ML, Sabine Kastner ML, Monique Breteler ML, Stefan Schwarz ML, Stephan Ehl ML, Thomas Brabletz ML, Christiane Kuhl ML, Svenja Caspers ML. Middle and back row (from left to right): Tobias Böckers ML, Frank G. Holz ML, Thomas G. Schulze ML, Martin Kerschensteiner ML, Tobias B. Huber ML, Sabine Eming ML, Hilmar Bading ML, Carien Niessen ML, Angelika Eggert ML, Stefan M. Pfister ML, Gerd Hasenfuß ML, Georg Schett ML, Thomas Bortfeld ML, Christian Stief ML, Gerhard Rogler ML, Robert Thimme ML.

Image: Markus Scholz | Leopoldina

Earth system components are linked in a variety of ways

The Leopoldina has published a new Report on Tomorrow's Science about Earth System Science

Climate change, the energy transition, the scarcity of raw materials, water shortages and the significant rise in damage inflicted by natural disasters are all the topic of increasingly heated public debates, with recent crises adding even more fuel to the fire. Equally, these issues are opening our eyes to the limits of our planet's habitability. And they are turning the geosciences into a key discipline for finding suitable solutions to keep Earth habitable.

BY ONNO ONCKEN ML*

In addition to these widely discussed topics, scientists are still searching for answers to many important questions, such as those concerning the origin of life, the predictability of natural disasters and human interaction with the climate and the environment. Against this backdrop, it is important to examine whether the geosciences in Germany are ideally structured to find scientific answers and practical solutions to these challenges. Coordinated by the Leopoldina, a group of specialists in the geosciences community discussed this matter in detail and recorded their findings in the "Earth System Science – Discovery, Diagnosis, and Solutions in Times of Global Change" Report on Tomorrow's Science.

The report highlights a series of strengths, including the widely and internationally respected methodological skills within the field's subdisciplines and the outstanding infrastructure in some areas. Despite this, a number of shortcomings are restricting scientists' ability to develop solutions effectively.

In recent decades, scientists have come to realise that Earth System components are closely linked in a variety of ways. While this understanding of the Earth's characteristics has long been firmly entrenched in subdisciplines of

the geosciences focusing on the climate, to the extent that even complex system concepts have been developed, this knowledge has so far only been explored to a limited degree in solid earth geosciences and other subdisciplines.

At the same time, the questions listed at the start of this article touch on such a broad range of topics that they cannot be solved by one subdiscipline alone. It is therefore clear that Earth System Science should be established as an overarching framework to enable scientists to make projections about future developments, assess the consequences of interfering with nature, estimate the risks of natural hazards and find solutions to address many fundamental issues.

Despite all their strengths, the geosciences in Germany are not ideally structured to tackle the increasingly apparent conditions and challenges we are facing. Education focuses far too heavily on the individual subdisciplines, with degree programmes, disciplines and even expert geoscience societies painting a highly fragmented picture.

Education and research are hesitant to integrate new professional fields for graduates, modern technological and methodological developments (such as those found in data science), modelling,

"The questions touch on such a broad range of topics that they cannot be solved by one subdiscipline alone."



Onno Oncken
Speaker of the Leopoldina's
"Earth System Research" working group
Image: GFZ

high-resolution analytics and real-time observations into their activities. Important infrastructure used to monitor critical developments in Earth System components is only found in isolated cases.

This is where the "Earth System Science" Report on Tomorrow's Science steps in. It presents political and academic decision-makers as well as the geoscience community with recommendations to form the basis for discussions about the changes needed. The key areas for action include a shift towards Earth System Science as the operating framework, improving networking across disciplines and institutions, modernising education and training and developing important infrastructure.

* Onno Oncken has been a member of the Leopoldina since 2002. His work as a geologist focuses on the dynamics of the lithosphere at the GFZ German Research Centre for Geosciences in Potsdam/Germany. He is one of two speakers of the working group that compiled the "Earth System Science" Report on Tomorrow's Science.

▶ **Report on Tomorrow's
Science
"Earth System Science"**

“Make them feel welcome”

Interview with member of the Leopoldina Presidium Ute Frevert on women in science

The Leopoldina has just published its statement on women in science. Ute Frevert ML, Director at the Max Planck Institute for Human Development in Berlin/Germany, is the speaker of the working group behind the statement. In her work as a historian, she has long had an interest in the construction and interpretation of gender differences.

After thoroughly examining the statistics, the statement comes to the conclusion that women are still “glaringly underrepresented” in science in Germany. Where is this particularly evident?

Ute Frevert: It is already evident among postdocs because after completing their PhD women are much more likely than men to look for a job outside of science. The lack of representation continues among young academics completing their habilitation to become full professors and is most striking among professors at the top of the pay scale and among directors at non-university research institutions.

Did the data surprise you?

Frevert: Yes, on the one hand. After all, there have been calls to end this disparity for a long time. And academic institutions have been taking action for around 20 years. But they only ever act slowly and in response to pressure. And, as I know only too well, there are setbacks and obstacles to contend with. Which is why I am not surprised.

What do you think are the main reasons for the situation?

Frevert: The notion that science is for men has been deeply embedded in both men’s and women’s minds for a long time. But even those women who do want to pursue a career in science often find it difficult to progress due to long-established structures and forces of habit. Male directors and department chairs are more likely to consult other men and to view them as potential successors. Women need to be very assertive to compete with that,



Ute Frevert is the speaker of the “Gender Equality in Science” working group and a member of the Leopoldina Presidium.

Image: Andreas Reeg

which isn’t for everyone. Ambition still tends to be a virtue seen as proper for men but unpleasant in women.

Women are strongly represented in the humanities and social sciences as well as in medicine up to PhD level. How can we keep them in science? What are the most important recommendations?

Frevert: Talented and highly qualified women must be encouraged to pursue a career in science and be given advice and support. We also need to make women feel welcome and to demonstrate that we are proud of their achievements. We must develop the structures and working conditions that women (and many men) want. This means creating environments that are cooperative, non-hierarchical, non-sexist and flexible in terms of working hours. Everyone must be offered realistic opportunities to progress. This is especially crucial at the postdoc stage, which is a time that often coincides with starting a family. Women in leadership positions also need support and visibility.

STEM subjects are proving particularly problematic. How can we inspire more female students to study them?

Frevert: First and foremost, by creating female role models. A subject with hardly any female professors is less likely to

attract female students. Past experience has shown that representation of around 30 percent is needed for a group of people to no longer feel like a minority. Academic institutions also need to develop degree programmes that have a “purpose”, since many women have a pronounced need to only do something if it seems worthwhile. A degree with the title “Physics of climate change” would therefore be more appealing than one simply called “Physics”.

The statement opens with a clear expression of the working group’s commitment to diversity as an important factor for the success of science. You emphasise that this declaration should not be understood as “binary”, but you do not discuss the issue of gender identity again. Why is that?

Frevert: We still have very little knowledge of the discrimination experienced by non-binary people in science – and our statement focuses exclusively on science. The data we do have is also unclear. This is why we decided not to comment on the issue, but to focus on women as a large demographic group.

What gives you hope that more women will pursue a career in research in the future?

Frevert: Scientific work is a wonderful and fulfilling career choice. The more women who enjoy success in science and who share their enthusiasm with others, the more women we will attract. But it is absolutely imperative that we keep up the momentum. This requires us to keep exerting pressure on policymakers. Without this, the science system would sadly remain much too static, or at least it would in this area.

■ THE INTERVIEW WAS CONDUCTED BY
ADELHEID MÜLLER-LISSNER

▶ Statement
“Frauen in der Wissenschaft”
(English version in progress)

“It falls to the world of science to find the best way of communicating and advising”

Part 3 in a series of articles on policy advice in the field of tension between science, politics and the media

The COVID-19 pandemic triggered an unprecedented situation, with disinformation and misrepresentation just two of the many exceptional challenges to be faced. As far as researchers are concerned, one of the key implications is that the science community must become more involved when it comes to finding the solutions to societal problems.

BY MICHAEL HALLEK ML*

The COVID-19 pandemic raised new challenges in the world of science, affecting research, communication and policy advice. Three factors coincided during these unprecedented times: (a) A fast-paced, highly dynamic situation shrouded in uncertainty affected (b) many communities susceptible to misinformation due to shifts in media usage, (c) which had already seen the rise of populist, nationalist movements determined to deliberately trigger or fuel fears by spreading lies and fake news before the pandemic had begun.

In a situation this complex, overcoming national and global crises is even more challenging. Finding the best way of communicating and advising is one of the scientific community's relevant tasks.

I personally became more involved in the winter of 2020/21 after realising that more and more critically ill patients in the intensive care unit at the hospital I was running were fighting for their lives on ventilators. It became clear to me that we were in danger of losing all control over the situation. Within the space of just six months, around 90,000 people had lost their lives to COVID-19 in Germany. There was a lot of discussion about the situation within my circles of friends and acquaintances in the science and medical professions and we decided to share constructive suggestions. Our No-COVID strategy set out practical plans for ope-

“The science community needs to learn to communicate clearly in a way that everyone can understand. It needs to demonstrate and defend the principles behind its approach.”



Michael Hallek,
member of the Leopoldina
Image: M. Wodak | MFK

ning up and ensuring a sustainable recovery using all the tools available within a democratic civil society.

A deliberate attempt by one section of the media to incorrectly frame our suggestions as restricting freedom resulted in a backlash. Guests with vaguely scientific backgrounds were invited onto chat shows where they made claims about No-COVID that could have easily been disproved by a quick fact check. The resulting false balance caused the government to falter when it came to consistently following a clear, straightforward, knowledge-based approach.

And yet all our hard work did end up having a positive impact. A modified version of the phased plan for managing the pandemic based on incidence rates that we'd developed at the start of 2021 was rolled out by many parties and local governments, replacing the previous strategy of playing it by ear.

Another win came in November 2021 following a call from the science and medical communities to swiftly turn the attention from the Bundestag elections to reinforced efforts to fight the pandemic. Some of our demands, including the creation of a board of qualified experts within government, were subsequently met.

So what lessons can we take forward? I have no doubt that the science community must become more involved when it comes to finding solutions to societal problems. We cannot stand down now. We need to learn to communicate clearly in a way that everyone can understand. We need to demonstrate and defend the principles behind our hypothesis-based approach. And we need to show that owning up to a mistake in our scientific work is a sign of quality and honesty rather than weakness. When communicating with the public we must also highlight the principles of a secular, well-informed society and its intrinsic characteristics and values like humility, honesty, empathy towards other people and living organisms and freedom (but not just our own freedom). This is the only way we can contribute to the modern European ideal of a democratic and pluralistic society.

* Michael Hallek is the Director of the Department I of Internal Medicine at the University Hospital of Cologne/Germany and the director of the Center for Integrated Oncology at the University of Cologne/Germany. He is an internist specialising in hematology and medical oncology and has been a member of the Leopoldina since 2011.

Up-to-date medical knowledge across the board

Discussion paper on science literacy published

The COVID-19 pandemic has left no doubt about just how important it is for medical professionals to follow the science. A discussion paper suggests ways of guaranteeing science literacy across the entire professional sphere.

The process of acquiring and maintaining science literacy through medical training and further training has always been lacking structure and coordination in Germany.

The discussion paper on lifelong science literacy in medicine through training and further training recommends fundamentally reviewing, refining and potentially redefining the roles and responsibilities of medical associations, association of statutory health insurance

physicians, expert societies and other bodies in terms of medical science literacy.

Due to their central role, faculties of medicine and university medical centres should play their part by coordinating and supporting the creation of training content. In terms of the subject matter covered, the training and further training should focus more heavily on new opportunities brought about by molecular biology, biotechnology and digitalisation in medicine, the impact of societal and global processes of change, and ethical aspects. ■ KH

► Discussion paper
“Wissenschaftskompetenz”
(German only)

Infrastructure for evidence-basing

Leopoldina roundtable on policy making backed by science

The Leopoldina initiative for evidence-based policy making promotes discussions between science and politics. An English-language online roundtable discussion has been set up for Tuesday, 20 September to share best-practice models from around the world.

Scientifically sound analyses cannot replace the political decision-making process, but they can provide a solid factual foundation upon which decisions can be made – as long as they are available in a timely fashion. The aim of the online roundtable discussion for the initiative represented by Leopoldina Vice President Regina T. Riphahn ML and Monika Schnitzer, an expert in comparative economics research, is to look into ways to improve the evidence-basing infrastructure.

Reports will also be given by practitioners on the ground: Mona Nemer, Chief Science Advisor to the Canadian government, Jeromin Zettelmeyer, Director of the think tank Bruegel, former Deputy Head of Department at the International Monetary Fund and former Director-General and Chief Economist at the Federal Ministry for Economic Affairs and Energy, Miriam Styrnol, Advisor for the British Evaluation Task Force, and Kai Hielscher, Head of the Regulatory Sandboxes Coordinating Office at the Federal Ministry for Economic Affairs and Climate Action. ■ LD

► Online-Roundtable
“How to strengthen
evidence-based policy
making?”

GREEN HYDROGEN



Hydrogen is an important energy carrier on our journey to climate neutrality.

Image: Corona Borealis | Adobe Stock

In May 2022, the European Union submitted two draft delegated acts on liquid or gaseous renewable fuels of non-biological origin and recycled carbon fuels – which includes hydrogen. In the view of a group of authors representing the Leopoldina, both acts are too restrictive, too detailed and too open to potential abuse to create the momentum required to kick-start a hydrogen economy. The regulatory framework needs to be more straightforward and predictable, with the scope to be rolled out globally.

In their commentary, the authors recommend classifying hydrogen as renewable based solely on the carbon footprint. This would also pave the way for transparent certification that could be standardised globally.

Furthermore, the carbon footprint of hydrogen should be determined using the applicable price of CO₂. Steadily increasing the price of CO₂ would be an effective control because it would make renewable hydrogen increasingly competitive. It would be reasonable to produce hydrogen with a higher carbon footprint during the ramp-up phase.

■ CA, KH

► Commentary
“Technologiehochlauf
von Wasserstoff”
(German only)

Joint symposium with Israeli academy

Presidents of two National Academies, Gerald Haug and David Harel, renew their strategic partnership

Gerald Haug ML, President of the Leopoldina, met with representatives from the Israel Academy of Sciences and Humanities (IASH) and leading Israeli scientific institutions in Jerusalem, Tel Aviv, Rehovot and Haifa.

During his trip, he signed a new agreement on the strategic partnership between the Leopoldina and IASH with its President, David Harel. This replaces the Memorandum of Understanding signed back in 2013. The agreement was signed at the opening ceremony of the

seventh Neurosciences Symposium held at the headquarters of the Israel Academy in Jerusalem. The symposium in the series organised by the Leopoldina and the Israel Academy of Sciences and Humanities was dedicated to cognition, memory, neurodegenerative disease and brain research.

While in Israel, Haug also visited Yad Vashem – the World Holocaust Remembrance Centre in Jerusalem with David Harel and Jörg Walendy, Deputy Chief of Mission at the German Embassy. ■ LB



Gerald Haug and David Harel, President of the Israel Academy.

Image: IASH

SPECIAL MENDEL MEDAL FOR CHRISTIANE NÜSSLEIN-VOLHARD



Developmental geneticist and Nobel Prize winner Christiane Nüsslein-Volhard ML has been awarded the Leopoldina Special Mendel Medal. The award is in recognition of her pioneering work on the embryonic development of fruit flies and the development and genetics of zebrafish. The prize ceremony was held on the Jägerberg in Halle (Saale)/Germany at the celebratory symposium to mark the 200th birthday of Gregor Mendel. “Christiane Nüsslein-Volhard is an exceptional developmental geneticist who is highly respected the world over. She has made ground-breaking discoveries through her research into the genetic control of the embryonic development of fruit flies,” plant geneticist Ulla Bonas ML, Vice President of the Leopoldina, said in her tribute speech. “With her innovative work on the development and genetics of zebrafish – and pattern formation in particular – she has once again proven to be a pioneer genetics.” The Mendel Medal is awarded by the Leopoldina for pioneering achievements in the fields of general and molecular biology and genetics. This is the first year there has been a special medal.

■ AB | Image: Markus Scholz | Leopoldina

► Special Mendel Medal

“A stroke of luck for the German scientific community”

Symposium for the 70th birthday of former President Jörg Hacker attended by guests from the worlds of politics and science

Guests from the worlds of politics and science arrived at the headquarters of the Leopoldina in Halle (Saale)/Germany for the celebratory symposium called “Bacteria, People and Science” to mark the 70th birthday of former President of the Leopoldina, Jörg Hacker ML.

The speakers at the symposium included the former President of the Israel Academy of Sciences and Humanities, Nili Cohen, the President of the Leibniz Association, Martina Brockmeier, and



At the symposium: Angela Merkel, Volker ter Meulen, Jörg Hacker, Gerald Haug, Reiner Haseloff.

Image: Markus Scholz | Leopoldina

the President of the Berlin-Brandenburg Academy of Sciences and Humanities, Christoph Marksches.

Former Chancellor Angela Merkel applauded Jörg Hacker’s achievements in science-based policy advice. She referred to Hacker as “a stroke of good luck for the German scientific community”. Later on in the symposium, Michael Hecker ML and Carmen Buchrieser ML looked back on the scientific success of the bacteriologist and his service to science management. ■ JK



Image: Soonthorn / Adobe Stock

Greve Prize

New Leopoldina award

Earlier this year, the Leopoldina called for nominations for its first-ever Greve Prize in partnership with the “Hamburgische Stiftung für Wissenschaften, Entwicklung und Kultur Helmut und Hannelore Greve”. The prize is awarded for outstanding achievements in the fields of „Natural Sciences/Medicine“ and „Technical Sciences“.

This year, the topic is „Scientific Foundations of a Sustainable Energy Supply“. A long list of outstanding scientific achievements were nominated for the EUR 250,000 prize money. The winner will be announced in October. The award ceremony will be held at the Town Hall of the Free and Hanseatic City of Hamburg/Germany on Thursday, 17 November. ■ ART



Greve Prize

ESYS

More solar and wind power

With renewable energy set to account for the majority of Germany’s power supply before too long, photovoltaics and wind energy will be vital pillars of the energy supply. What’s more, the Russian war of aggression against Ukraine has proven that our renewable energy supply needs to be expanded as quickly as possible.

In the statement entitled “Wie kann der Ausbau von Photovoltaik und Windenergie beschleunigt werden? (How can we speed up the process of adding to the photovoltaic and wind power capacity?)”, the academic project ESYS proposes twelve potential ways of overcoming the obstacles in order to pick up the pace. ■ AB



„Ausbau von Photovoltaik und Windenergie“
(German only)

Bausch Fellowship

The careers of academy members

Sandra Klos, research assistant at the Austrian Academy of Sciences has been awarded this year’s Johann-Lorenz-Bausch Fellowship by the Friends of the Leopoldina Academy. She has been examining CVs from the Leopoldina archives and library that were produced by academy members between 1870 and 1955 as part of a transnational comparison at the Centre for Science Studies in Halle (Saale)/Germany.

This research is part of the dissertation project on the careers of Austrian Academy of Sciences members that she has been working on since October 2020 through the Vienna Doctoral School of Historical and Cultural Studies. ■ LBE



Johann-Lorenz-Bausch
Scholarship

People

Awards and Honours

- **Peter Bäuerle** ML, member of the Chemistry Section, received the Emil Fischer Medal from the German Chemical Society (Frankfurt am Main/Germany).
- **Carolyn Bertozzi** ML, member of the Chemistry Section, was honoured with the Dr H.P. Heineken Prize for Biochemistry and Biophysics by the Royal Netherlands Academy of Arts and Sciences (Amsterdam/Netherlands).
- **Ralph Bock** ML, member of the Genetics/Molecular Biology and Cell Biology Section, was accepted as a member of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)/Germany.
- **Alessandra Buonanno** ML, member of the Physics Section, was accepted as a member of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)/Germany.
- **Alena Buyx** ML, member of the Philosophy of Science Section, was awarded the Bavarian Constitution Medal.
- **Angelika Eggert** ML, member of the Gynaecology and Paediatrics Section, was accepted as a member of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)/Germany.
- **Claudia Felser** ML, member of the Chemistry Section, received the Liebig Medal from the German Chemical Society (Frankfurt am Main/Germany).
- **Gerald H. Haug** ML, member of the Earth Sciences Section and President of the Leopoldina, was accepted as a member of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)/Germany.
- **Stefan Hell** ML, member of the Physics Section, was elected by the Order Pour le Mérite (Berlin/Germany) as a domestic member.
- **Anthony Hyman** ML, member of the Genetics/Molecular Biology and Cell Biology Section, was awarded the Körber European Science Prize by the Körber-Stiftung (Hamburg/Germany).
- **Beat Keller** ML, member of the Agricultural and Nutritional Sciences Section, was appointed as a member of the European Molecular Biology Organization (EMBO) (Heidelberg/Germany).
- **Heyo K. Kroemer** ML, member of the Physiology and Pharmacology/Toxicology Section, was accepted as a member of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)/Germany.
- **Benjamin List** ML, member of the Chemistry Section, was accepted as a member of the Academy of Sciences and Literature (Mainz/Germany).
- **Thomas C. Mettenleiter** ML, member of the Veterinary Medicine Section, was awarded an honorary doctorate in veterinary medicine from the Justus Liebig University Giessen/Germany.
- **Joachim Mössner** ML, member of the Internal Medicine and Dermatology Section, was awarded the Order of Merit of the Federal Republic of Germany.
- **Christiane Nüsslein-Volhard** ML, member of the Genetics/Molecular Biology and Cell Biology Section, was awarded an honorary doctorate from the Pompeu Fabra University (Barcelona/Spain). She also received the Special Mendel Medal from the German National Academy of Sciences Leopoldina.
- **Heymut Omran** ML, member of the Gynaecology and Paediatrics Section, was named as a Fellow of the European Respiratory Society (ERS) (Lausanne/Switzerland).
- **Andreas Peschel** ML, member of the Microbiology and Immunology Section, received the Emil von Behring Prize from the Philipps-Universität Marburg/Germany.
- **Ole Holger Petersen** ML, member of the Physiology and Pharmacology/Toxicology Section, was awarded the Palade Prize by the International Association of Pancreatology (IAP) (Kyoto/Japan).
- **Stefan M. Pfister** ML, member of the Gynaecology and Paediatrics Section, was appointed as a member of the European Molecular Biology Organization (EMBO) (Heidelberg/Germany).
- **Paola Picotti** ML, member of the Genetics/Molecu-

lar Biology and Cell Biology Section, was appointed as a member of the European Molecular Biology Organization (EMBO) (Heidelberg/Germany).

■ **Peter Rehling** ML, member of the Biochemistry and Biophysics Section, was appointed as a member of the European Molecular Biology Organization (EMBO) (Heidelberg/Germany).

■ **Christoph M. Schmidt** ML, member of the Economics and Empirical Social Sciences Section, was awarded the Innovation Prize of the German federal state of North Rhine-Westphalia in the honorary award category.

■ **Nicola A. Spaldin** ML, member of the Chemistry Section, received the Hamburg Prize for Theoretical Physics from the Joachim Herz Foundation (Hamburg/Germany).

■ **Michael Struwe** ML, member of the Mathematics Section, was awarded the Benedictus Gotthelf Teubner Science Prize (Leipzig, Dresden, Berlin, Stuttgart/Germany).

■ **Sebastian Thrun** ML, member of the Informatics Section, was named “Pioneer of the Year” for 2022 by the Pioneer Forum run by financial consulting company Plansecur (Kassel/Germany).

■ **Lothar H. Wieler** ML, member of the Global Health Section, was awarded an honorary doctorate by the Veterinary Medicine Department at the Ludwig Maximilian University of Munich/Germany.

■ **Peter Zoller** ML, member of the Physics Section, was awarded the Austrian Decoration for Science and Art, First Class.

New class I members

■ **Leigh Royden** ML, Cambridge/USA, Massachusetts Institute of Technology, Earth Sciences Section

New class II members

■ **Andrea Ablasser** ML, Lausanne/Switzerland, École Polytechnique Fédérale de Lausanne (EPFL), Microbiology and Immunology Section

■ **Sonja-Verena Albers** ML, Freiburg im Breisgau/

Germany, University of Freiburg, Genetics/Molecular Biology and Cell Biology Section

■ **Wulf Amelung** ML, Bonn/Germany, University of Bonn, Agricultural and Nutritional Sciences Section

■ **Michael Boutros** ML, Heidelberg/Germany, German Cancer Research Center in the Helmholtz Association, Human Genetics and Molecular Medicine Section

■ **Kai-Uwe Eckardt** ML, Berlin/Germany, Charité – Universitätsmedizin Berlin/Germany, Physiology and Pharmacology/Toxicology Section

■ **Ivo Feussner** ML, Göttingen/Germany, Georg-August-University of Göttingen, Organismic and Evolutionary Biology Section

■ **Robert Grosse** ML, Freiburg im Breisgau/Germany, University of Freiburg, Physiology and Pharmacology/Toxicology Section

■ **Helmut Grubmüller** ML, Göttingen/Germany, Max Planck Institute for Multidisciplinary Sciences, Biochemistry and Biophysics Section

■ **Claudia Höbartner** ML, Würzburg/Germany, Julius-Maximilians-Universität of Würzburg (JMU), Biochemistry and Biophysics Section

■ **Katalin Karikó** ML, Mainz/Germany, BioNTech SE, Human Genetics and Molecular Medicine Section

■ **Andreas Peschel** ML, Tübingen/Germany, University of Tübingen, Microbiology and Immunology Section

■ **Hans-Georg Rammensee** ML, Tübingen/Germany, University of Tübingen, Microbiology and Immunology Section

■ **Tina Romeis** ML, Halle (Saale)/Germany, Leibniz Institute of Plant Biochemistry, Organismic and Evolutionary Biology Section

■ **Rotem Sorek** ML, Rehovot/Israel, Weizmann Institute of Science, Genetics/Molecular Biology and Cell Biology Section

■ **Alexandra Zoe Worden** ML, Kiel/Germany, GEOMAR Helmholtz Centre for Ocean Research Kiel, Organismic and Evolutionary Biology Section

Deceased members

■ **Johannes W. Rohen** ML | 18 September 1921 to 26 May 2022 | Erlangen/Germany | Anatomy and Anthropology Section

■ **Dierk Scheel** ML | 7 November 1950 to 18 May 2022 | Halle (Saale)/Germany | Genetics/Molecular Biology and Cell Biology Section

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Abbreviations:

ML = Member of the Leopoldina