



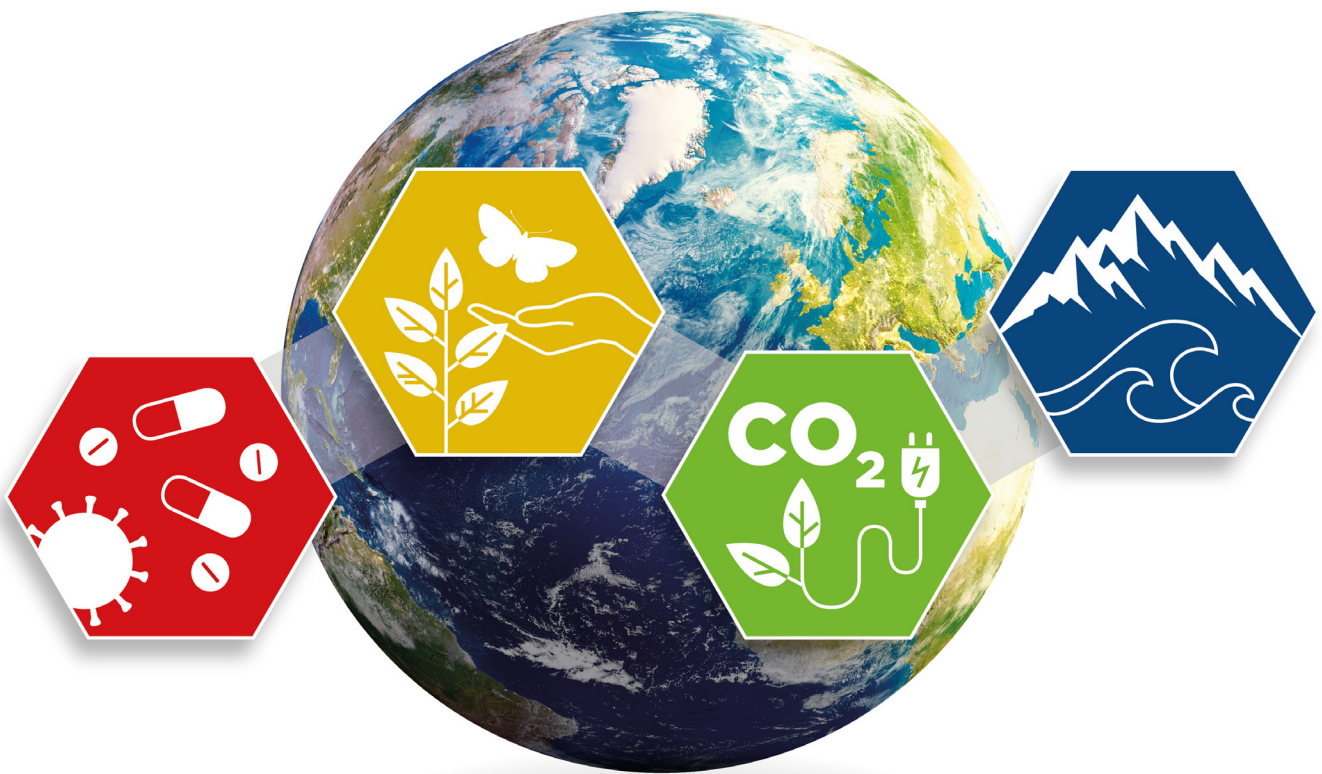
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der Wissenschaften

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German National Academy of Sciences

Halle (Saale), 25 February 2022



Science7: input for the G7 summit

Leopoldina members **Antje Boetius** and **Thomas Mettenleiter**
on the science-related G7 topics

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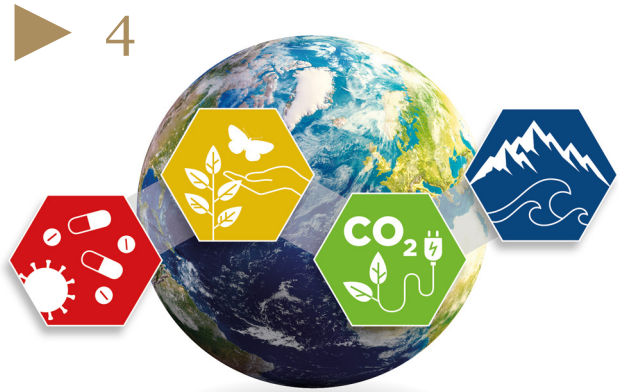
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Editorial

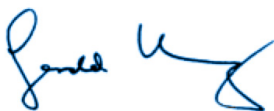
Dear Members and Friends of the Leopoldina,

Climate action in polar regions, the restructuring of the energy system, the use of antivirals as a means of defence against future pandemics and a One Health approach. These are the issues which the science academies of the G7 countries will be assessing together in 2022. Under the leadership of the Leopoldina, they will contribute to the agenda of the G7 summit meeting of heads of state and government in Elmau/Germany. The joint process of publishing statements strengthens cohesion between the seven science academies and is an inspiring experience for the researchers involved (pages 4 and 5).

When the Leopoldina last led the Science7 process in 2015, I contributed to the statement on the future of the oceans. Marine conservation was subsequently included in the closing communiqué of the 2015 summit in Elmau. Seven years have passed since then and we can now expect that the voice of science will be heard even more loudly and clearly than it was at that time. After all, in the course of the pandemic, science has generally gained visibility and respect. There are still challenges, however, such as in the communication of research results, the dissemination of science-based policy advice and inappropriate media reports on individual researchers. This is motivation enough for the Leopoldina to take steps to shed more light on the relationship between science, society and politics. As part of this initiative, we have launched a new series of articles on the topic. I set the ball rolling on page 9 of this issue.

Incidentally, in early December of last year, an example of inappropriate media reporting prompted a rapid joint response from the Alliance of Science Organisations in Germany in the form of a call for more objectivity in discussions and reporting (page 8). It was reassuring to see that the community was able to act so quickly. This gives us reason to hope that science is well placed to overcome the current communication challenges.

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

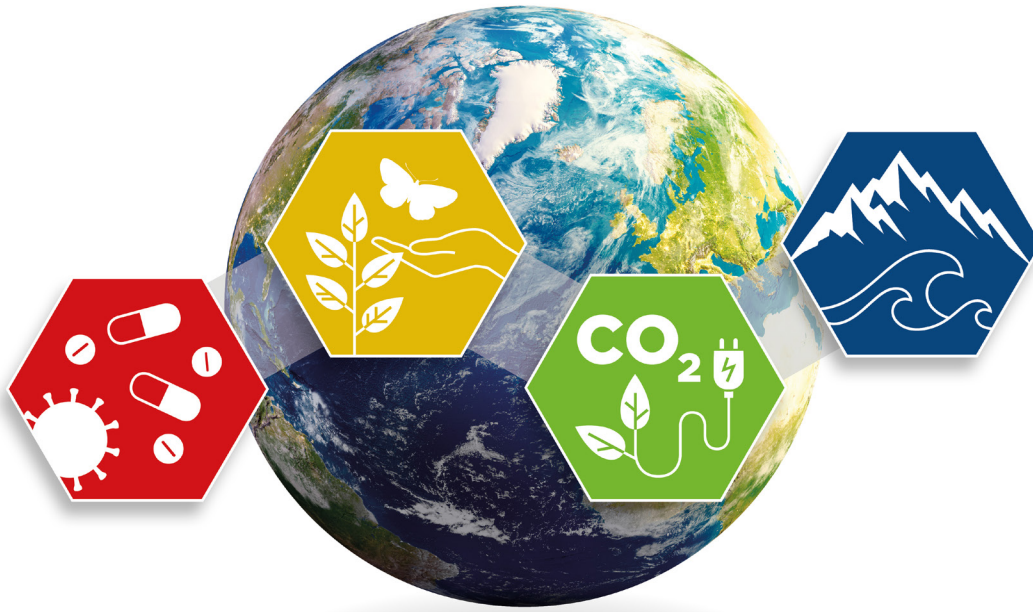


Prof. (ETHZ) Dr. Gerald Haug, President of the Leopoldina

Image: David Ausserhofer | Leopoldina

“We need to achieve a healthy relationship with nature”

Leopoldina members Antje Boetius and Thomas Mettenleiter on G7 agenda setting



Graphic: Sisters of Design

The science academies of the G7 countries help to shape the agenda of the G7 summit meetings between heads of state and government – this year under the Leopoldina’s leadership. As part of the Science7 process, they prepare statements on four topics. This year’s topics are climate action in polar regions, the restructuring of the energy system, the use of antivirals as a means of defence against future pandemics and the One Health approach. Marine researcher Antje Boetius ML and virologist Thomas Mettenleiter ML are involved in this process.

Why should climate action, the energy transition and global health all form part of the G7 agenda?

Antje Boetius: All four statements tie in with the major challenge of transformation. Humanity has created a situation where there is a considerable imbalance between humankind, on the one hand, and nature and all other forms of life on earth, on the other. The G7 countries have played a significant role in this. But they now have the chance to make a substantial con-

tribution to finding the required solutions. We need to achieve a healthy relationship with nature – one which will protect us from being constantly exposed to new disasters and extremes.

Thomas Mettenleiter: Health is another factor common to all four issues. After all, the climate crisis is primarily also a health emergency. The statement on zoonoses, antibiotic resistance and One Health emphasises the links between these two emergencies. In essence, the One Health approach addresses how the health of humans, animals and the environment is inextricably linked. This is demonstrated by the fact that around 60 percent of infectious diseases known to affect humans originated from animals. Examples include measles, HIV and influenza. More than 75 percent of newly emerging infectious disease, such as COVID-19, are zoonoses, which means that they can be transmitted between animals and humans. Influencing factors like climate change also form part of the One Health approach.

Are pandemics expected to become more common in the future?

Mettenleiter: Most pandemics emerge as a result of pathogens jumping from animals to humans. Animal-to-human transmission has become much more likely due to increased human contact with domestic, farm and wild animals. This can be attributed to a growing population, a greater demand for animal products, more intense land use, deforestation and climate change. One of the ideas behind One Health is to recognise and reduce risky points of contact between humans and animals. To achieve this, we need to identify the driving forces and gain a greater understanding of the impact of changes in land use, such as forest clearance.



G7 GERMANY
Science 7 Dialogue



Antje Boetius ML

Director of the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, in Bremerhaven/Germany.

Image: Esther Horvath | Alfred Wegener Institute



Thomas Mettenleiter ML

President of the Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health, Greifswald Island of Riems/Germany.

Image: Wolfram Maginot | FLI

Ms Boetius, why do the oceans and polar regions have such an important part to play in mitigating climate change?

Boetius: Certain parts of the world's oceans and polar regions provide us with key indications of the risks we are facing. By observing them, we can see that climate change is already happening and is already having a profound effect on nature and human life. The two strongest indicators of this are coral bleaching and the decline in Arctic sea ice. More than half of the world's tropical coral reef has been damaged by global warming, acidification and overexploitation of the oceans. Arctic sea ice is also extremely sensitive to the rising

temperatures caused by greenhouse gas emissions. As Arctic sea ice is lost, so too are the habitats of many species, including large marine mammals. In addition to this, the Earth system is no longer able to perform some of its vital functions.

Both of you are familiar with international policy advice through your work on previous statements. Are scientists' recommendations taken to heart?

Boetius: The issues raised at global summits by academies like ours are certainly taken up. The statements are deliberately concise, help to highlight the urgency of the issues and support governments to

use scientific findings to tackle the challenges of the future. Although we are gradually making progress, politicians need to act more quickly and courageously.

Mettenleiter: I agree that change is happening. For example, the fact that the issue of One Health is now being discussed internationally by a dedicated panel can be attributed to a Franco-German political initiative. The One Health High-Level Expert Panel founded by the World Health Organization and other global organisations met for the first time in May 2021 and will be instrumental in achieving progress in this area. Generally speaking, I do not expect our recommendations to be implemented to the letter. Scientists provide evidence-based advice, but it is politicians who make the decisions.

Boetius: When it comes to climate and nature conservation, scientists often write about what is needed from a long-term, global perspective. In contrast, politicians tend to focus on more short-term local or national issues which are of importance to society. At present, I believe that too much responsibility is being placed on the individual. To make progress on climate action and nature conservation, we need a large political framework and, more importantly, much greater international cooperation. And, as shown by the pandemic, this applies to health as well.

■ THE INTERVIEW WAS CONDUCTED BY ANNE BRÜNING

SCIENCE 7 DIALOGUE FORUM IN PREPARATION FOR THE G7 SUMMIT

On 1 January, Germany took over the presidency of the Group of Seven leading industrialised countries (G7). As part of its tenure, it will host the G7 summit of heads of state and government at Schloss Elmau from 26 to 28 June 2022. For more than 15 years, the science academies of the G7 countries have been publishing joint statements on selected topics on the summit agenda. As part of the German G7 Presidency, the Leopoldina – as the German National Academy of Sciences – has, for the second time, been engaged by the German government to oversee the

Science7 (S7) process, which will prepare science-based policy advice for the summit. The Leopoldina first performed this duty in 2015.

The Leopoldina has chosen for the science academies to focus on the impact of climate change on polar regions and oceans as well as specific measures to accelerate the decarbonisation of the economy and energy systems. The other topics chosen are the development of antivirals for improved pandemic preparedness and global health challenges brought about by zoonoses and

antimicrobial resistance. The joint statements will be prepared by members of the Leopoldina and internationally renowned experts before being finalised by the G7 academies at a working meeting on 4 and 5 April. The recommendations will be presented to the German government at the Science 7 Dialogue Forum in Berlin/Germany on 31 May and 1 June 2022. ■ KK,CHW

- ▶ G7 policy advice
- ▶ Science 7 Dialogue Forum

Transition to a new, climate-neutral economic and social system

Research Summit on 4 May will discuss “innovation policy for tackling global challenges”

As devastating as the COVID-19 pandemic has been and continues to be, it has also made policymakers, businesses, scientists and many other key players in society profoundly aware of the global structure’s fragility and our dependency on our natural environment. It is therefore only logical that the next Research Summit in Germany in May will examine major global challenges in the context of innovation policy. Besides the COVID-19 pandemic, the event will focus on topics such as anthropogenic climate change.

BY GEORG SCHÜTTE*

The world is currently facing a difficult question: How can all the bright ideas and financial resources being poured into crisis management strategies be used not only to stabilise the established – and in parts outdated – economic system, but also to help develop bold innovations to make it more fit for the future? Can the current crisis be used as an opportunity to develop new technologies and patterns of consumption which will make us more resilient to future crises?

Focus on social consequences

I am certain that the transition to a new, climate-neutral economic system will dominate many of the debates at the Research Summit in Germany. I personally hope that the discussions will focus not only on the potential offered by technology, but also on the social consequences. This is important because transforming industries which are harmful to the climate will have ramifications beyond the world of work. Traditional jobs will be lost, while new ones will emerge.

How can we prevent economic and technological change from causing a greater divide between social groups?

“I personally hope that the discussions at the Research Summit will focus not only on the potential offered by technology, but also on the social consequences.”

Georg Schütte
Secretary General of the
Volkswagen Foundation

Image: Philip Bartz | Volkswagen Foundation



To answer this question, the Research Summit also needs to explore how the economy and state intend to fulfil their duty of care. How can we support people who feel anxious and who will be put at an economic and social disadvantage as a result of the inevitable tide of change?

Although these questions have been asked many times before, they will be examined pointedly if they are discussed at the Research Summit. This is because you would be hard-pushed to find another event which brings together a similar number of outstanding decision-makers from politics, economics, science and other areas of society for discussions year after year.

As a long-standing participant, I know that the discussions are used for much more than self-marketing purposes. On the contrary, the Research Summit has always been a platform for heated debates, where researchers can disagree with the CEOs of large corporations and CEOs can thank researchers for giving them new inspiration.

Every Research Summit is an opportunity to shape the agenda of innovation

policy in Germany. The fact that members of the German government and leading figures from the European Commission regularly participate in the summit is a testament to the importance of this event.

Visions of sustainability

In 2021, in her function as Germany’s Chancellor, Angela Merkel herself addressed the Research Summit’s participants: “If we are to survive with our European social and economic model and our visions of sustainability and a future worth living intact, then we need to be more innovative and productive than other parts of the world and we need to act more quickly in many areas.” It is with this aspiration in mind that we will meet for the next Research Summit on 4 May.

* Dr. Georg Schütte is Secretary General of the Volkswagen Foundation in Hannover/Germany. Previously, he was a member of their Board of Trustees from 2013 to 2018 and served as State Secretary of the German Federal Ministry of Education and Research from 2009 to 2019.

“Children’s rights are an important issue”

Leopoldina member Jutta Gärtner on her work for the German National Academy of Sciences

Paediatrician and adolescent medicine specialist Jutta Gärtner ML was elected to the Presidium of the Leopoldina in September 2021. Since November, she has also been Chair of the Leopoldina Human Rights Committee, which focuses on the promotion of human rights and ethics in the sciences. In this interview, she talks about the wide range of activities she is involved in within the Academy.

Ms Gärtner, since the beginning of the COVID-19 pandemic, the Leopoldina has issued ten ad hoc statements and various other publications on the topic. Despite holding a challenging, time-consuming position as a director at a university medical centre, you have actively contributed to these publications. What was your motivation behind this?

Jutta Gärtner: Like many others, I was motivated by the opportunity to speak out during such unprecedented circumstances both on a personal level and on behalf of the Leopoldina. For example, in late November when we no longer wanted to stand by and watch the number of COVID-19 cases continue to skyrocket. Our multidisciplinary group of clinicians, basic researchers, ethicists and legal scholars therefore called for more effective social distancing measures and sparked a debate on a “vaccine mandate”. If we don’t speak out, who would?

The ad hoc statement on the COVID-19 pandemic published in June 2021 focuses on children and adolescents. What was most important to you when preparing this statement?

Gärtner: We wanted to spell out the importance of not neglecting children and adolescents during the pandemic. In spring 2020, the decision to close schools was taken quite suddenly. At the start of the pandemic, little attention was paid to the burden this placed on children themselves as well as on parents and



Jutta Gärtner ML

Director of the Centre for Paediatric and Adolescent Medicine at the University Medical Center Göttingen. The specialist in neuropaediatrics conducts research on neurometabolic and neurodegenerative diseases as well as multiple sclerosis in children and adolescents. Jutta Gärtner has been a member of the Leopoldina since 2014 and a Presidium Member since September 2021. In November 2021, she became the Chair of the Leopoldina Human Rights Committee (HRC), which supports scientists all over the world whose work has made them subject to repression.

Image: Markus Scholz | Leopoldina

families as a whole. This has changed, and numerous other statements have been published by various groups, including teachers’ associations and medical organisations. During lockdown, we noticed that far fewer children were hospitalized with infectious diseases compared with the previous year, but that the wards were still packed full with children suffering from conditions like headaches, abdominal pain and eating disorders. The rise in these kinds of illnesses was too sharp to be ignored.

Of all the topics concerning children covered by the statements published du-

ring the course of the COVID-19 pandemic, which are most close to your heart?

Gärtner: The importance of a healthy upbringing should be at the forefront of our minds at all times and not just during the COVID-19 pandemic. Children and adolescents go through certain developmental stages at a specific age, which means they cannot simply catch up later. Once we are in calmer waters again, we need to examine the issue of children’s rights in more detail.

You recently became the Chair of the Leopoldina Human Rights Committee. What are the most burning issues here?

Gärtner: On this committee, we support scientists from around the world who are subject to repression because of their research. I want us to pay even greater attention to the situation of colleagues in Europe, as I believe that there is a particular need for significant action in some Eastern European countries.

As the German National Academy of Sciences, the Leopoldina offers independent science-based policy advice. In all honesty, are there times when you would like an expertocracy, in which scientists can put their fact-based recommendations into practice promptly and comprehensively?

Gärtner: No. In order to make progress and share their views unimpeded, scientists need to remain independent from political constraints and be part of an international network. This is why I am strictly against mixing these two areas of responsibility.

■ THE INTERVIEW WAS CONDUCTED BY
ADELHEID MÜLLER-LISSNER

- ▶ Jutta Gärtner
- ▶ Presidium
- ▶ Human Rights Committee

Call for more objectivity in discussions and media reporting

Alliance of Science Organisations in Germany stresses the basic rules of a free and open society



Alexander von Humboldt
Stiftung/Foundation



DAAD
Deutscher Akademischer Austauschdienst
German Academic Exchange Service

DFG Deutsche
Forschungsgemeinschaft

Fraunhofer

HRK Hochschulrektorenkonferenz
Die Stimme der Hochschulen

Leibniz
Leibniz
Gemeinschaft



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HELMHOLTZ
SPITZENFORSCHUNG FÜR
GROSSE HERAUSFORDERUNGEN

WR | WISSENSCHAFTSRAT

MAX PLANCK
GESELLSCHAFT



During crises like the COVID-19 pandemic, society needs fact-based, objective and responsible journalism. This was the message emphasised by the Alliance of Science Organisations in Germany in its joint “Aufruf zu mehr Sachlichkeit in Krisensituationen (Call for more objectivity in crisis situations)” published on 6 December 2021. The statement was prompted by a report by German daily newspaper BILD in which physicists Viola Priesemann, Dirk Brockmann and Michael Meyer-Hermann were held responsible for the introduction of stricter measures against COVID-19. The statement read:

“With its article ‘Die Lockdown-Macher’ (‘The Lockdown Makers’) of 4 December 2021, the BILD newspaper continues its biased reporting, which began last year, against scientists who put their professional expertise at the service of politics and society in order to help in the fight against the COVID-19 pandemic and its consequences, which are alarmingly visi-

ble at present.

The way in which individual researchers are denounced and held personally responsible for urgently needed but unpopular measures to combat the pandemic (‘trio of experts spoils the festive season’) and the very fact that they are named in this way at all is defamatory. Moreover, as has already happened elsewhere, this can easily contribute to a climate of opinion in which scientists are threatened with, or exposed to physical and psychological violence.

The Alliance finds such forms of dispute entirely unacceptable since they contradict the basic rules of a free and open society as well as the fundamental principles of our democracy. Objective discussions and reporting are especially necessary and far more effective in times of crisis and in situations which are already emotionally charged enough as it is.

Scientific findings play a substantial role in politics and society, not only during pandemic crises. Scientists must

therefore be in a position to share their expertise freely.

The Alliance of Science Organisations in Germany is a union of the most important German research organisations. It issues regular statements on important issues concerning research policy. The Wissenschaftsrat (German Council of Science and Humanities) was chair of the Alliance for 2021. The other members of the Alliance are the Alexander von Humboldt Foundation, the German Academic Exchange Service, the German Research Foundation, the Fraunhofer Society, the Helmholtz Association, the German Rectors’ Conference, the Leibniz Association, the Max Planck Society and the German National Academy of Sciences Leopoldina.”

Joint declaration
„Aufruf zu mehr Sachlichkeit in Krisensituationen“
(German only)

Policy advice in the area of conflict between science, politics and the media

Gerald Haug, President of the Leopoldina, has authored the first in a series of articles on this topic

Despite having largely negative consequences, the COVID-19 pandemic has also been a catalyst for some positive change. For example, vaccines have been developed at a rate which was previously almost inconceivable. That being said, shortcomings in our health system, such as in the area of digitalisation, have had a serious impact on our ability to tackle the pandemic. And we still do not know what long-term effect the experiences of the last two years will have on the relationship between science, politics and the media. The answer to this question will depend heavily on how our understanding of scientific freedom and responsibility develops from here.

BY GERALD H. HAUG ML*

Scientific freedom, which is enshrined in the German Constitution, gives researchers the scope to use their curiosity to support the cultural, social and economic development of society in the best way they can. This freedom also enables scientists to give independent policy advice – of the kind provided by the Leopoldina as the German National Academy of Sciences – without being influenced by any political or economic interests.

A rise in public interest

The pandemic has acted as a catalyst in this respect as well. Science-based analyses and possible courses of action had to be presented more quickly and scientists were expected to appear more frequently in the media. Furthermore, differences in scientific opinion led to doubts concerning the trustworthiness of science and whether it has a legitimate role to play in political decision-making.

I see the rise in public interest in the workings, mechanisms and limitations of science-based policy advice as a positive

“I see the rise in public interest in the workings, mechanisms and limitations of science-based policy advice as a positive sign.”

Gerald Haug
President of the Leopoldina
Image: David Ausserhofer | Leopoldina



sign. At last, science is taken as seriously as it has long been demanding to be. As a result, scientists now bear much of the responsibility for ensuring that the latest relevant research is used to shape public debate reliably, comprehensibly and promptly.

Scientific freedom

This is not only a matter of communicating factual information and presenting possible courses of action. It is also a case of demonstrating how scientific freedom works in practice by showing how science is both independent from government objectives and committed to tackling societal challenges. On no account should Wilhelm von Humboldt’s talk of “necessary freedom and valuable isolation” be taken too literally. Anyone who is devoted to independent science must not completely ignore societal needs and expectations.

I would like to take the example of the Leopoldina’s activities to respond to the occasionally raised general suspicion that scientists were a mouthpiece for politicians during the pandemic: Our academy provides interdisciplinary working groups with the freedom to analyse urgent societal challenges and propose

realistic recommendations for action on the basis of the latest scientific knowledge. The discussions needed to perform this work bring us into contact with the world of politics and other areas outside science. But this does not make us any less independent – quite the opposite is true. Our work enables us to help scientific freedom to play an increasingly relevant role in a society which is striving not only to combat pandemics, but to develop sustainably.

Constructive contributions

In upcoming issues of this newsletter, members of the Leopoldina will share their views on the Academy’s policy advice work in the area of conflict between science, politics and the media. I look forward to reading their pieces, which I imagine will not only make a constructive contribution to discussions within the Leopoldina, but will also inspire a public debate which I hope will increase trust in science.

* Gerald H. Haug is a climate researcher, geologist and paleoceanographer and has been the President of the German National Academy of Sciences Leopoldina since 2020.

Perspectives on a science-based regulation of genome-edited plants

Leopoldina member **Ralph Bock** and legal scholar **Hans-Georg Dederer** on the impact of a 2019 statement

In their joint 2019 statement, the Leopoldina, the Union of German Academies and the German Research Foundation (DFG) made the case for excluding certain genome-edited plants from the European Union's strict regulatory framework for genetically modified organisms. The European Commission has now initiated a legislative process following this advice.

BY RALPH BOCK ML UND
HANS-GEORG DEDERER*

Genetically modified organisms (GMOs) are regulated by restrictive laws in the European Union (EU). This has caused green genetic engineering to virtually grind to a halt in Europe. Even the majority of research and development work in this field is now conducted outside of Europe. There are fears that new breeding methods involving genome editing will suffer a similar fate. These methods create new plant varieties which are indistinguishable from conventionally bred plants without needing to integrate foreign genes.

However, a ruling by the European Court of Justice on 25 July 2018, determined that genome-edited plants are also GMOs and are therefore subject to the EU's strict legal framework. A working group set up largely by the Leopoldina addressed this issue, and over the course of a year prepared a statement on genome editing in plants. In this statement, the working group formulated urgent, scientifically justified recommendations for action for policymakers and, more importantly, legislators. These recommendations included the pressing need to amend the GMO legal framework in Europe.

The statement received a great deal of attention among scientists and politicians, including at EU-level, and prompted discussions between experts and members



Ralph Bock ML

Molecular biologist and director at the Max Planck Institute of Molecular Plant Physiology in Potsdam/Germany

Image: MPI of Molecular Plant Physiology



Hans-Georg Dederer

Professor at the University of Passau/Germany. The legal scholar is a specialist in European commercial law

Image: University of Passau

of the German state parliaments, German parliament and European Parliament.

The DFG and the Leopoldina also organised an international conference in autumn 2020, which addressed political decision-makers working at the European level and attracted even more political attention to the issue. At this event, a discussion was held on the statement and its recommendations in the presence of members of the European Parliament as well as high-level Commission staff and representatives of national authorities.

A study on new genomic techniques published by the European Commission in April 2021 largely confirmed the assessments made by the working group. According to the European Commission, the key question is whether the current legislation is still fit for purpose or whether it needs to be amended. Experts from the working group subsequently met with department leaders at the German Federal Ministry of Food and Agriculture to share their views on the European Commission's study against the backdrop of the statement from 2019.

In November 2021, at the invitation of the European Parliament's Committee on Agriculture and Rural Development and in the presence of civil servants from the European Commission, members of the working group presented the key points made in the statement and answered questions from members of the European Parliament. Shortly before this meeting, the European Commission initiated a legislative process to amend the legal framework for GMOs by publishing an "inception impact assessment".

In the second quarter of 2022, the European Commission will conduct a further public consultation. It then intends to make an actual legislative proposal one year later.

* Ralph Bock ML and Hans-Georg Dederer are members of the "Genome-Edited Plants" working group of the Leopoldina, the Union of German Academies and the DFG.

Statement
"Regulation of genome-edited plants in the EU"

“What was done for the survivors?”

Leopoldina member Paul Weindling on his research into medicine under National Socialism

In 2015, Leopoldina member Paul Weindling received the Anneliese Maier Research Award from the Alexander von Humboldt Foundation. At the Centre for Science Studies (ZfW), the British medical historian used the funding he received to create a database of the victims of the medical and psychiatric research conducted during National Socialism. In this interview, he takes stock and looks ahead to the ZfW’s Spring Conference in June.

Mr Weindling, can you tell us about the database of victims of medical research under National Socialism that has been created over the past five years?

Paul Weindling: We have now collated 28,656 biographies. We are able to link data on perpetrators, prisoner functionaries and research literature. That data is now available for further research. But it’s also important for a family to know that their relative’s story did not end when they were murdered, but that their brain was preserved for research purposes. We can be transparent about that now, which is absolutely crucial.

How difficult has it been to reconstruct the biographies?

Weindling: It has been cumbersome, with hours spent exploring archives such as the extensive collection of prisoner files held by the Arolsen-Archives – International Center on Nazi Persecution. We often come across documentation relating to experiments such as the many preserved files on the malaria experiment run by tropical disease specialist Klaus Schilling at Dachau concentration camp with 11,100 victims. And we also have the example of hospital clerk Eugen Ost, who saved evidence that shows there was some resistance and attempts at sabotage.

What exactly do you mean by sabotage here?



Paul Weindling ML

has been a member of the Leopoldina since 2014. He joined Oxford Brookes University in the UK as a Professor in the History of Medicine in 1998. He is an expert on the history of medicine under National Socialism.

Image: Oxford Brookes University

Weindling: Some of the children participating in the “twin experiments” performed by SS doctor Josef Mengele were not actually twins. They were in fact just relatives that looked alike and managed to survive by pretending to be twins. During the “cold water immersion experiments” at Dachau concentration camp, prisoners tampered with the water thermometers. And that means we have to take the results with a pinch of salt. That’s an important layer of the story.

The database also includes people whose brains were used for psychiatric experiments by the Kaiser Wilhelm Society, doesn’t it?

Weindling: Yes, so here we have to answer the question: How did the patient die? Were they perhaps a victim of involuntary euthanasia and killed by starvati-

on, malnutrition or poisoning? Once that has been established, it is necessary to ascertain how the brain specimens were used for further research.

You are remembering the victims through your work but is there any form of compensation on top of that?

Weindling: Since the mid-1980s, it has been a certain awareness that Nazi research was unethical. But the victims were not considered as individuals. The question here is, what was done for the survivors? Many of them suffered pain for the rest of their lives. For example, Sinti and Roma prisoners were used for research into chemical weapons. It was later claimed that these people were criminals whose incarceration was legal. That’s absurd and racist. But it means the victims were not eligible for compensation for many years. The story of the victims of medicine under National Socialism still needs further investigation.

The topic of ‘Medicine under National Socialism’ and your research are going to be the focus of the Centre for Science Studies’ Spring Conference. What do you have planned?

Weindling: We want to share an overview of the research into victims and perpetrators and present our findings. The plan is also to open up critical discussions on topics like the scars left behind by medicine under National Socialism in Germany. We will also be covering cultural aspects. There will be public lectures on all of the topics covered. I’m very pleased that this event will be going ahead in June to provide visibility for our team’s work at the Centre for Science Studies.

■ THE INTERVIEW WAS CONDUCTED BY
CHRISTINE WERNER

▶ Paul Weindling

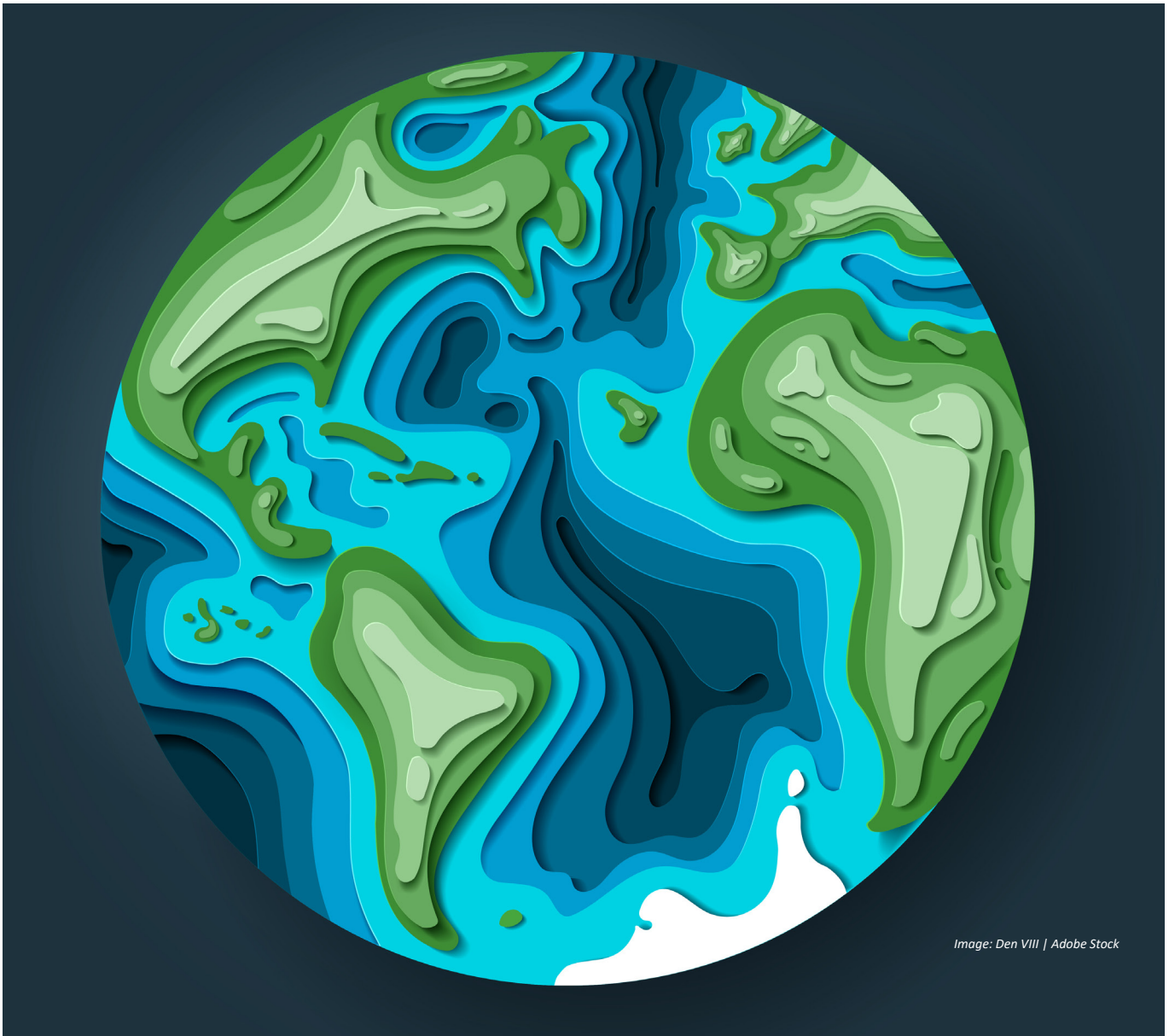


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Research for the Global Sustainable Development Goals

The United Nations General Assembly adopted a resolution proclaiming 2022 as the International Year of Basic Sciences for Sustainable Development (IYBSSD). With this resolution, it aims to pay tribute to the pivotal role played by basic research in advancements in the areas of medicine, industry, agriculture, the environment, communication and culture.

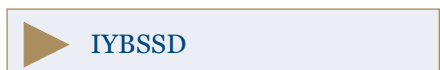
The objective of the international year is to encourage both developed and developing countries to expand their own basic research capacities. In doing

so, they can use basic research to make an important contribution to the achievement of the 17 Sustainable Development Goals (SDGs) approved in 2015.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) will act as the lead agency for the IYBSSD. In cooperation with over 90 other organisations, including many national academies and expert societies, the Leopoldina will support the international year and will be part of the initiative's International Advisory Committee. The IYBSSD will be officially launched with

an opening conference at the UNESCO headquarters in Paris on 1 July 2022. Together with UNESCO and other UN organisations, the initiative's global partners can organise IYBSSD events around the world until the end of June 2023 with the aim of promoting dialogue between scientists, policymakers and members of society to highlight the role of basic research in sustainable development.

■ RN,CHW



People

Awards and Honors

■ **Asifa Akhtar** ML, member of the Biochemistry and Biophysics Section, received the Christa Šerić-Geiger Prize from the Carl-Friedrich Geiger Foundation (Kehl/Germany).

■ **Ralf Bartenschlager** ML, member of the Microbiology and Immunology Section, was awarded an honorary doctorate by the University Medical Centre Mainz.

■ **Andreas J. Bäuml** ML, member of the Microbiology and Immunology Section, received the 2021 Robert Koch Award from the Robert Koch Foundation (Berlin/Germany).

■ **Carolyn Bertozzi** ML, member of the Chemistry Section, was awarded the 2022 Wolf Prize in Chemistry by the Wolf Foundation (Herzliya/Israel) and the 2022 Lifetime Mentor Award by the American Association for the Advancement of Science.

■ **Alena Buyx** ML, member of the Philosophy of Science Section, was awarded the Heinz Maier-Leibnitz Medal by the Technical University of Munich and was elected as a member of acatech – National Academy of Science and Engineering (Munich/Germany).

■ **Stefanie Dehnen** ML, member of the Chemistry Section, received the 2022 Gottfried Wilhelm Leibniz Prize from the German Research Foundation.

■ **Ivan Đikić** ML, member of the Biochemistry and Biophysics Section, was elected as a member of the Academy of Sciences and Literature (Mainz/Germany).

■ **Karl Max Einhäupl** ML, Member of the Neurosciences Section, was elected as the Chair of the Board of Trustees of the Freie Universität Berlin.

■ **Jutta Gärtner** ML, member of the Gynaecology and Paediatrics Section, has taken over as Chair of the Leopoldina Human Rights Committee.

■ **Michael Grätzel** ML, member of the Chemistry Section, was elected as a foreign member of the Chinese Academy of Sciences.

■ **Markus Gross** ML, member of the Informatics Section,

was elected as a member of acatech – National Academy of Science and Engineering (Munich/Germany).

■ **Michael Hallek** ML, member of the Internal Medicine and Dermatology Section, was appointed to the German Council of Science and Humanities (Cologne/Germany).

■ **Stefan Hell** ML, member of the Physics Section, was awarded the Werner von Siemens Ring by the foundation of the same name (Berlin/Germany).

■ **Ralph Hertwig** ML, member of the Psychology and Cognitive Sciences Section, was elected as a member of acatech – National Academy of Science and Engineering (Munich/Germany).

■ **Herbert Jäckle** ML, member of the Genetics/Molecular Biology and Cell Biology Section, was elected as a foreign member of the Chinese Academy of Sciences.

■ **Michael Kaschke** ML, Member of the Engineering Sciences Section, was elected as the President of the Stifterverband (Donors' Association for the Promotion of Humanities and Sciences) in Germany (Essen/Germany).

■ **Ursula Keller** ML, member of the Physics Section, was awarded the 2020 Frederic Ives Medal by the Optical Society, previously known as the Optical Society of America (Washington DC/USA).

■ **Christine Klein** ML, member of the Neurosciences Section, was awarded the Edmond J. Safra Fellowship in Movement Disorders by the Michael J. Fox Foundation (New York/USA).

■ **Horst Klinkmann** ML, member of the Internal Medicine and Dermatology Section, was awarded the Friendship Order (Huân chương Hữu nghị) by the government of Vietnam.

■ **Katharina Kohse-Höinghaus** ML, member of the Chemistry Section, was elected as a foreign member of the Chinese Academy of Sciences.

■ **Ferenc Krausz** ML, member of the Physics Section, was awarded the 2022 Wolf Prize for Physics by the Wolf Foundation (Herzliya/Israel).

■ **Kerstin Kriegelstein** ML, member of the Anatomy and

Anthropology Section, was re-elected as Vice President of the German Rectors' Conference.

■ **Thomas Lengauer** ML, member of the Informatics Section, was appointed as a Fellow of the Association for Computing Machinery (New York/USA).

■ **Klaus-Robert Müller** ML, member of the Informatics Section, was elected as a member of acatech – National Academy of Science and Engineering (Munich/Germany).

■ **Bernhard Nebel** ML, member of the Informatics Section, was appointed as a Fellow of the Association for Computing Machinery (New York/USA).

■ **Walter Rosenthal** ML, member of the Human Genetics and Molecular Medicine Section, was elected as Vice President of the German Rectors' Conference.

■ **Uğur Şahin** ML, member of the Human Genetics and Molecular Medicine Section, was awarded the Louis-Jeantet Prize for Medicine by the Louis-Jeantet Foundation (Geneva/Switzerland). He was also elected as a member of the Academy of Sciences and Literature (Mainz/Germany), which awarded him the Academy Prize of Rhineland-Palatinate for innovative and groundbreaking research. He was also awarded the Werner von Siemens Ring by the foundation of the same name (Berlin/Germany) and the Honorary Ring by the University Medical Centre Mainz.

■ **Bernt Schiele** ML, member of the Informatics Section, was appointed as a Fellow of the Association for Computing Machinery (New York/USA).

■ **Ferdi Schüth** ML, member of the Chemistry Section, was appointed to the German Council of Science and Humanities (Cologne/Germany).

■ **Manfred Strecker** ML, member of the Earth Sciences Section, was appointed to the German Council of Science and Humanities (Cologne/Germany).

■ **Klement Tockner** ML, member of the Earth Sciences Section, was elected as a member of the Academy of Sciences and Literature (Mainz/Germany).

■ **Özlem Türeci** ML, member of the Human Genetics and Molecular Medicine Section, was awarded the Louis-Jeantet Prize for Medicine by the Louis-Jeantet Foundation (Geneva/Switzerland). She was also elected

as a member of the Academy of Sciences and Literature (Mainz/Germany), which awarded her the Academy Prize of Rhineland-Palatinate for innovative and groundbreaking research. She was also awarded the Werner von Siemens Ring by the foundation of the same name (Berlin/Germany) and the Honorary Ring by the University Medical Centre Mainz.

■ **Wolfgang Wahlster** ML, member of the Informatics Section, was elected as a foreign member of the Engineering Academy of the Czech Republic (Prague/Czech Republic).

New Class II members

■ **Uğur Şahin** ML, Mainz/Germany, BioNTech SE, Human Genetics and Molecular Medicine Section

■ **Özlem Türeci** ML, Mainz/Germany, BioNTech SE, Human Genetics and Molecular Medicine Section

New Class III members

■ **Thomas Bortfeld** ML, Boston/USA, Harvard Medical School, Massachusetts General Hospital, Radiology Section

■ **Svenja Caspers** ML, Düsseldorf/Germany, Institute of Anatomy I, Heinrich Heine University Düsseldorf, Anatomy and Anthropology Section

■ **Angelika Eggert** ML, Otto Heubner Centre for Paediatric and Adolescent Medicine, Charité – Universitätsmedizin Berlin, Gynaecology and Paediatrics Section

■ **Hermann Haller** ML, Hannover/Germany, Clinic for Kidney and Hypertension Diseases, Hannover Medical School, Internal Medicine and Dermatology Section

■ **Frank G. Holz** ML, Bonn/Germany, Department of Ophthalmology at Bonn University Hospital, Ophthalmology, Oto-Rhino-Laryngology and Stomatology Section

■ **Tobias B. Huber** ML, Hamburg/Germany, Centre for Internal Medicine, University Medical Centre Hamburg-Eppendorf, Internal Medicine and Dermatology Section

■ **Christine Klein** ML, Lübeck/Germany, Department of Neurology, Institute of Neurogenetics and Section of Clinical and Molecular Neurogenetics, Neurosciences Section

■ **Sabine Kastner** ML, Princeton/USA, Princeton Neuroscience Institute, Princeton University, Neurosciences Section

■ **Benedikt Pannen** ML, Düsseldorf/Germany, Department of Anaesthesiology, Düsseldorf University Hospital, Surgery, Orthopaedics, Anaesthesiology Section

■ **Georg Schett** ML, Erlangen/Germany, Medical Clinic 3, Universitätsklinikum Erlangen, Internal Medicine and Dermatology Section

■ **Thomas G. Schulze** ML, Munich/Germany, hospital of the Ludwig-Maximilians-University (LMU) Munich, Institute of Psychiatric Phenomics and Genomics, Neurosciences Section

New Class IV members

■ **Andrea Bréard** ML, Erlangen/Germany, Institute of Languages and Cultures of the Middle East and East Asia, Friedrich Alexander University Erlangen-Nürnberg, History of Science and Medicine Section

■ **Nicola Fuchs-Schündeln** ML, Frankfurt am Main/Germany, Goethe University Frankfurt am Main, Economics and Empirical Social Sciences Section

■ **Dominik Hangartner** ML, Zurich/Switzerland, Immigration Policy Lab, Swiss Federal Institute of Technology Zurich, Economics and Empirical Social Sciences Section

■ **Michael Nitsche** ML, Dortmund/Germany, Department of Psychology and Neurosciences, Leibniz Research Centre for Working Environment and Human Factors at the Technical University of Dortmund, Psychology and Cognitive Sciences Section

■ **Axel Ockenfels** ML, Cologne/Germany, Department of Economics, University of Cologne, Economics and Empirical Social Sciences Section

■ **Julian Reiss** ML, Linz/Austria, Institute of Philosophy and Scientific Method, Johannes Kepler University Linz, Philosophy of Science Section

■ **Magnus Striet** ML, Freiburg im Breisgau/Germany, Department of Fundamental Theology and Philosophical Anthropology, University of Freiburg, Cultural Sciences Section

■ **Claudia Wiesemann** ML, Göttingen/Germany, Department of Medical Ethics and History of Medicine, University Medical Centre Göttingen, Philosophy of Science Section

Deceased members

■ **Ikuo Ishiyama** ML | 27 February 1931 to 18 November 2021 | Saitama/Japan | Pathology and Forensic Medicine Section

■ **Rolf Klötzler** ML | 11 January 1931 to 15 November 2021 | Leipzig/Germany | Mathematics Section

■ **Reinhold E. Schmidt** ML | 17 December 1951 to 23 January 2022 | Hannover/Germany | Internal Medicine and Dermatology Section

■ **Jörn Thiede** ML | 14 April 1941 to 15 July 2021 Kiel/Germany | Earth Sciences Section

■ **Günter Vojta** ML | 23 October 1928 to 24 October 2021 | Dresden/Germany | Physics Section

■ **Edward O. Wilson** ML | 10 June 1929 to 26 December 2021 | Burlington Massachusetts/USA | Organismic and Evolutionary Biology Section

Imprint

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Abbreviations:

ML = Member of the Leopoldina