



Leopoldina

news

Deutsche Akademie der Naturforscher Leopoldina –
Nationale Akademie der Wissenschaften

Halle (Saale), 16 March 2012

01/2012

The Leopoldina has moved into its new headquarters



The Leopoldina's open day sparked great interest.

Photo: M. Scholz

At the beginning of 2012, the Leopoldina moved into its new headquarters in Halle. The staff of the President's office, the Secretary General's office, the departments of International Relations, Political Consultancy and Press and Public Relations as well as the administration

The new residence seen from the Moritzburg.

Photo: D. Ausserhofer

now work from the building at Jägerberg 1, which was extensively refurbished with funds from the second economic stimulus package. The new headquarters at a central location in Halle have further raised the public profile of the German National Academy of Sciences. Guests at events hosted by the Leopoldina are not just those who are interested in science. At the first open day in December 2011, 6200 visitors came to see the building and learn more about the work of the national academy.

The building will be officially inaugurated with a festive ceremony and a scientific symposium in May this year. Numerous invited guests from science and politics are expected to come. Federal Minister Annette Schavan has already confirmed her attendance.

(mab)

Dear members

and friends of the Leopoldina,

The year 2012 began with the Leopoldina moving into its second home in Halle. The new headquarters, located near the city



centre in a beautifully refurbished residence on the Jägerberg, is already hosting a wide range of events and developing into a place of encounter between science

and politics, and science and the public.

The official inauguration of the new seat of the German National Academy of Sciences Leopoldina will take place this spring in the presence of numerous illustrious guests. Before then, a first cooperation with the art museum of Saxony-Anhalt in the neighbouring Moritzburg will further enhance the Academy's good local contacts. Starting on 24 April the exhibition "Das Antlitz der Wissenschaft" (The Face(s) of Science) will show portraits of Leopoldina members across the centuries. I would also like to draw special attention to a further item on the Leopoldina's agenda this year: between 20 June and 22 June the Academy will hold a conference entitled "Physik, Philosophie und Friedensforschung" (Physics, philosophy and peace research) in honour of the 100th birthday of the distinguished Leopoldina member Carl Friedrich von Weizsäcker. We will keep you up to date on these and other topics in this newsletter and in the following issues.

Kind regards,

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News

Jules Hoffmann appointed member of the Académie française

The biologist and immunologist Jules Hoffmann ML has been elected to the Académie française, one of the oldest and most prestigious learned societies in France. The Académie française is dedicated to maintaining and regulating the French language. Hoffmann will take over seat (fauteuil) 7 from the philologist Jacqueline de Romilly, who died in 2010.

Jules Hoffmann was born in 1941 in Luxembourg and has been a French citizen since 1970. He studied biology and chemistry at Louis Pasteur University in Strasbourg and earned his doctorate there in 1969. From 1964 Hoffmann worked as a research assistant at the Centre National de la Recherche Scientifique (CNRS) in Strasbourg and became a research director there in 1974. In 1978 he obtained a professorship in zoology and general biology at Louis Pasteur University. From 1994 to 2006 Hoffmann directed

the CNRS Institute of Molecular and Cellular Biology. From 1987 he was a corresponding member of the French national academy, the Académie des sciences in Paris, becoming a full member in 1992 and the academy's president from 2007 to 2008.

Hoffmann has been a member of the Leopoldina since 1988, and has always maintained close ties to the Academy. It was Hoffmann, for example, who gave the keynote speech at the ceremony when the Leopoldina was appointed the German National Academy of Sciences in 2008. He also shared his expertise with the Leopoldina over many years as a Senator in the Senate, a position he held until autumn 2011.

Since the Académie française was founded in 1635, many great scholars such as Jean d'Alembert, Pierre-Simon de Laplace, Louis Pasteur and the 1965



Nobel Laureate Jules A. Hoffmann.

Photo: Brigitte Eymann / Académie des sciences

Nobel Laureate in Medicine François Jacob have counted among its members. The Académie is charged with compiling an official dictionary of the French language, which also takes account of linguistic developments and changes in the academic and scientific spheres. (cw)

Archive of digitalised tapes

It is now possible to listen to scientists like Carl Friedrich von Weizsäcker

The Leopoldina has restored and digitalised around 160 magnetic tape recordings from its archives. Unique recordings from the years 1959 to 1991, some of which were on the verge of decay, have now been preserved in this way. The recordings contain speeches held during these years by renowned scientists at events of the Leopoldina in Halle. Among them are eleven tapes with speeches by the Leopoldina member Carl Friedrich von Weizsäcker.

The Leopoldina's entire collection of magnetic tape recordings, consisting of 395 hours of recordings on 161 tapes, has now been digitalised and made accessible to research. All the original material has also been restored. Of great interest are, for example, the audio recordings docu-

menting the speeches by the physicist Carl Friedrich von Weizsäcker, who supported the Leopoldina when Germany was still divided and repeatedly travelled to Halle and other places in the GDR to give scientific lectures. The Leopoldina tapes document his speeches of the years 1957, 1977 and 1989.

Numerous speeches by former Presidents of the Leopoldina, such as the botanist Kurt Mothes (in office 1954-1974) and the physicist Heinz Bethge (in office 1974-1990), have also been saved. "One of our objectives in restoring and digitalising these recordings was to make it possible to listen to people who were important for the history of the Leopoldina," says Dr Danny Weber, director of the Leopoldina's archive. (mab)

Audio samples

You can access three audio samples on the Leopoldina website (in German):

www.leopoldina.org/de/akademie/archiv/tondokumente.html

- Opening speech of the 1967 annual assembly by the President of the Leopoldina Kurt Mothes
- Lecture event on quantum chemical objects held in 1977 with Carl Friedrich von Weizsäcker with an introduction by the President of the Leopoldina Heinz Bethge
- Extract from the introduction to the ladies' programme of the annual assembly 1967 by Max Delbrück

International Issues

Cooperation between the Leopoldina and the Network of African Science Academies (NASAC)



Representatives of NASAC and the Leopoldina during a preparatory meeting for the cooperation, held on 5 and 6 September 2011 in Nairobi, Kenya.

Photo: AAS

In autumn 2011 the Leopoldina signed an agreement with the Federal Ministry of Education and Research (BMBF) confirming the ministry's support of a cooperation between the Academy and the network of the 17 African science academies (NASAC). The funding, to be provided over a three-year period, amounts to about €900,000. The main focus lies on building networks between German and African scientists and in strengthening NASAC's role as an advisory body for political decision-makers in Africa. This cooperation project is part of the Federal Republic of Germany's Strategy for Africa.

The Leopoldina and NASAC will collaborate on topics such as water management, biodiversity, adaptation to climate change, and health. Conferences related to these issues will be held in the next three years with the participation of leading scientists from African countries and Germany as well as representatives from the governments of African states and from the African Union (AU). The participation of decision-makers is designed to give scientists better understanding of the re-

levant political strategies and of policymakers' need for scientific analyses. It is also hoped that by raising scientists' awareness of the relevant political issues, they will be able to provide useful input to political decision-making processes.

Thanks to the support of the BMBF, the Leopoldina is also in a position to support projects of the NASAC member academies. To this end, the Leopoldina and NASAC have established the Capacity Building Grant and called for project proposals by the academies at the beginning of 2012. NASAC has set up a committee of academy members to evaluate the scientific quality of the proposals; the NASAC presidium will decide on the funding amounts allocated. The aim of the funding is to enable smaller academies to organise conferences and meetings for their members.

NASAC was founded in 2001 in Nairobi, Kenya, on the initiative of the pan-African African Academy of Sciences (AAS), with support from the global network of academies IAP (InterAcademy Panel). The NASAC head office is based in the AAS building in Nairobi. Since summer 2011 the President of the Academy of Sci-

ence for South Africa (ASSAf), Professor Robin Crewe has also been President of NASAC. The network focuses on analysing socially relevant scientific questions, but also drafts science policy statements, for example on the issue of the emigration of top African scientists.

The Leopoldina regards cooperation with the academies in Africa to be very important because strengthening the position of outstanding scientists there can have a wide range of positive repercussions. It can stimulate economic innovation, help raise living conditions, improve the situation in the universities, and help reduce the emigration of highly qualified researchers and workers from Africa. Science-based political advisory work by African academies can also help improve the quality of political decisions and generally make policy formation processes more fact-based and transparent. (csd)

See also: www.nasaonline.org



Prof. Dieter Bimberg during his Leopoldina Lecture at the Lomonosov University in Moscow (left) and participants at the 1st Russian-German Young Researchers Cooperation Forum.



Photos: Leopoldina

The Leopoldina gets involved in the German-Russian Year

Leopoldina Lecture and the 1st Russian-German Young Researchers Cooperation Forum in Moscow

Bringing young scientists from Germany and Russia closer together – that is what the Leopoldina hopes to achieve through its involvement in the German-Russian Year of Education, Science and Innovation 2011/12. This was the idea behind the 1st Russian-German Young Researchers Cooperation Forum held in Moscow from 3 to 6 December 2011, an event co-organised by the Young Academy and the Russian Academy of Sciences' Council of Young Scientists and funded by the Federal Ministry of Education and Research.

Around 30 young scientists from Germany and Russia met at the Russian Academy to discuss the bilateral collaboration from a young researchers' perspective and to identify possible ways of intensifying collaboration in future. The event was an opportunity for the Young Academy – a joint project of the Leopoldina and the Berlin-Brandenburg Academy of Sciences and Humanities – and the Russian Academy of Sciences' Council of Young Scientists to present themselves and their work. The two networks have much in common, including the mission of making the voice of young scientists heard in both academic and non-academic contexts.

The forum benefitted greatly from the presence of representatives from the Moscow offices of the German Research

Foundation, the Helmholtz Association, the German Academic Exchange Service and the Freie Universität Berlin. Not only did they provide advice on funding and designing cross-border projects, they brought a great deal of experience to the lively debate on the situation of young scientists in Germany and Russia. Their advice was particularly valuable for the question of whether it would be feasible to step up institutionalised binational collaboration.

All in all, the forum was rated as highly positive by the participants, thanks also to a diverse programme that included interdisciplinary dialogue and visits to academy institutes like the Palaeontology Museum.

A particular highlight of the 1st Russian-German Young Researchers Cooperation Forum was the Leopoldina Lecture that Prof. Dieter Bimberg ML gave to an open audience at the prestigious Lomonosov Moscow State University (MGU). Entitled "Energy Efficient Electronics and Photonics: Bringing Quantum Dots to Work", his talk gave the large audience a taste of the future. He described how technological developments based on semiconductor nanostructures can not only make computers and modern communication tools work better, they can greatly reduce their energy needs when they are working hard. Prof. Bimberg included

plenty of examples, which made the talk very engaging and accessible. The technology he described was extremely complex but he managed to make it comprehensible for scientists and the general public alike.

The German professor was given a very warm reception from Prof. Alexei R. Khokhlov, deputy dean of the MGU, during his welcome address. The illustrious audience members – such as Nobel Laureate Prof. Zhores Alferov, Leopoldina members Prof. Detlev Ganten ML and Prof. Jörn Thiede ML, former head of the National Science Foundation Prof. Arden L. Bement, and chair of the council of the Russian Foundation for Basic Research Prof. Vladislav Panchenko – were further proof of the great interest generated by the talk.

The next German-Russian event will feature the same winning combination of a profile-raising public lecture and an internal workshop for young scientists. The 2nd Russian-German Young Researchers Cooperation Forum will take place in Berlin and Halle on 17 and 18 April. Renowned physicist and Nobel Laureate Zhores Alferov will give the Leopoldina Lecture at the event. (rn)

Conference Reports

The major medical challenge of the future

Symposium on Personalised Medicine from 12 to 14 January in Vienna



Organiser Martin Röcken ML at the opening of the symposium. Georg Stingl ML, member of the Leopoldina Presidium and co-organiser of the event, speaking with philosopher Peter Sloterdijk. (from left)

Photos: ÖAW/point of view

The field of medicine is currently undergoing a paradigm shift. The technological revolution of the past decade has profoundly transformed our understanding of the causes of disease and individual disease susceptibility. Today doctors know that apparently homogenous disease entities mask differences between individuals that can have a major influence on the course a disease takes and on how patients respond to treatment. Gaining a better understanding of these differences and devising treatments tailored to the needs of patients is the major challenge medicine faces in the future. As well as raising many questions regarding medical science and medical economics, personalised medicine also involves numerous legal, social, ethical and moral issues. To examine these issues and related matters from an interdisciplinary angle, the Austrian Academy of Sciences and the Leopoldina held an international symposium in Vienna from 12 to 14 January 2012.

In his keynote speech, Peter Sloterdijk, who is Professor of Philosophy and Aesthetics at Karlsruhe University of Arts and Design (HfG), argued that medicine is one of the last strongholds of the belief in progress. And indeed, researchers today have reason to be optimistic that it will soon be possible to significantly improve the treatment and prognosis of those suffering from serious diseases such as

metastasised melanoma. But what exactly is "personal" about the many new forms of treatment available? In a sense, the practice of medicine has always been personal, with a direct relationship between doctor and patient.

Nevertheless, "personalised medicine" is more than just a buzzword beloved by the media, as Prof. Philipp U. Heitz ML, member of the Leopoldina Presidium an emeritus professor at the University of Zurich, made clear in his opening speech. However, Prof. Heitz prefers the term "precision medicine", since this new approach takes genetically determined differences (polymorphisms) in proteins and other building blocks of life into account in order to develop customised forms of treatment.

As Prof. Giulio Superti-Furga ML, the Scientific Director of the Center for Molecular Medicine in Vienna, explained, variations in the amount or function of proteins due to polymorphisms or to epigenetic influences on the genome can have a major impact on an individual's susceptibility to certain diseases and/or response to treatment. Prof. Matthias Schmuth of the Department of Dermatology and Venereology at the University of Innsbruck used atopic dermatitis (a type of eczema) as an example to illustrate the heterogeneity of well-known disease entities. Better understanding of these inter-individual differences will lead to many improvements in the diagnosis and treatment of disease in the future.

Prof. Jouni Uitto of Thomas Jefferson University in Philadelphia demonstrated the progress made in predictive medicine over the last decades, using hereditary blistering dermatoses (epidermolysis bullosa) – by way of example. Prenatal testing for this kind of severe genetic disorder generally used to require collecting chorionic villus samples and preparing them to be examined under the electron microscope – an expensive and time-consuming process. Today, pre-implantation genetic diagnosis has made it possible to take a few cells from the embryo and use DNA sequencing to screen for severe forms of epidermolysis bullosa before embryos are even implanted in the uterus.

In many cases, it is now possible to identify characteristics of diseases long before they first become noticeable. And when diseases have already taken hold, there are methods available today that make it possible to predict the patient's prognosis and response to treatment. In his presentation, Dr Boris Bastian ML of the University of California, San Francisco, showed that melanomas are a more or less heterogeneous group of tumours whose malignant behaviour depends on a wide variety of mutations. Identifying such pathogenetically significant changes allows doctors to provide targeted treatment. Thus tumours associated with so-called B-Raf mutations can be treated with Vemurafenib, a new drug that targets and inhibits these signalling (B-Raf)

molecules. As Prof. Reinhard Dummer of University Hospital Zurich's Dermatology Division explained, treatment with the new drug has achieved astonishing results, at least over the short term. Nevertheless, this new development in the treatment of melanoma is still in the fledgling stages.

Significant progress has been made in the case of cutaneous T-cell lymphoma, a class of non-Hodgkin's lymphomas that have been classified as a single disease entity for 30 years now. Scientists have a much better understanding of T-cell lymphoma than they used to, not least thanks to the ground-breaking research of Prof. Thomas Kupper, the Chairman of the Department of Dermatology at Brigham and Women's Hospital, which is a teaching affiliate of Harvard Medical School. Thanks to his work, we now know that disparate clinical pictures presented by mycosis fungoides and Sézary syndrome (types of cutaneous T-cell lymphoma) have to do with the fact that the lymphoma cells occur in different T-cell subsets: Mycosis fungoides is a malignancy of so-called "effector memory" T-cells, while Sézary syndrome is a malignancy of "central memory" T cells.

IDENTIFYING APPROPRIATE THERAPIES

Not every drug has the same effect on everyone. This realisation is nothing new, yet it does mean that often we are not able to predict the outcome of a particular therapy. Prof. Matthias Schwab from the University of Tübingen talked about how the field of pharmacogenomics, in particular, is aiming to make it possible to move from this strategy of trial and error. This more personalised approach to medical care should allow us to identify which individuals are at risk of experiencing side effects from a drug and thus enable us to protect them from undergoing therapies needlessly and suffering from their undesired effects. Prof. Giuseppe Pantaleo from the University of Lausanne explained that this is already possible in certain areas. For example, an HLA screening of patients with HIV allows them to be protected from dangerous side effects of drugs.

Prof. Matthias Beck from the University of Vienna's Institute for Moral Theology argued that recognition of the fact that there is not one single, generic "patient type" but that each patient has his

or her own individual medical markers will change the way we perceive humanity. But Prof. Richard Flavell of Yale demonstrated that diseases cannot only be explained by the genetic makeup of each individual. He conducted experiments that revealed that a diarrhoeal disorder triggered by a genetic mutation can be passed on to genetically healthy animals. His assumption is that this phenomenon is due to an alteration in the composition of the intestinal flora. The more important finding, however, is that these genetic defects can actually be compensated with physiological intestinal flora. Thus environmental factors can override the effects of a genetic phenotype, meaning that ultimately the environment determines which genetic predispositions are manifested and how. This effect can be so radical as to turn a previously "sick" phenotype into a healthy one and vice versa.

The need to take an individual view of patients and the realisation that many diseases are characterised by complex genotypes and phenotypes will represent significant challenges for clinical trials and the pharmaceutical industry in the future. This topic was addressed in presentations by Prof. Markus Müller of Vienna University and by Prof. Günter Stock, President of the Berlin-Brandenburg Academy of Sciences and Humanities.

RAPID PACE OF DEVELOPMENT

A number of technological, organisational and legal adjustments will be necessary if we are to keep up with the rapid pace of development in contemporary bioscience. The cutting-edge imaging methods so impressively presented by Prof. Gregory Lanza of Washington University in St. Louis are just as much a part of that as adequate tissue banks. Prof. Kurt Zatloukal of the Institute of Pathology at the University of Graz, a renowned expert in the field of biobanking, explained very clearly why setting up biobanks involves much more than just collecting patient material. A short period of hypoxia during sampling is enough to modify the molecular profile of tissues so much that they can no longer provide consistent data. As Prof. Dr. Hans-Werner Mewes of the University of Munich demonstrated, clinicians also need a solid understanding of bioinformatics to be able to make use of the richness of the available data.

Prof. Erwin Böttinger, head of the Institute of Personalized Medicine at Mount Sinai Hospital in New York and an internationally renowned expert in the field of personalised medicine, provided insights into his institution's ingenious infrastructure.

LAW AND ETHICS IN FOCUS

Although the scientific progress made in the field of personalised medicine is extremely impressive in certain subfields of medicine, it is equally important to consider the ethical, legal and social issues involved. Genetic counsellors like Prof. Christine Patch of Guy's and St. Thomas' NHS Foundation Trust in London play an important role here. Her lecture raised crucial questions about the topic, such as: Does identifying risk genes in a newborn turn that person into a lifelong patient? Is there such a thing as a right to remain uninformed? How can informed consent – an important legislative basis in modern medicine – be achieved in this day and age? Both legislators and the judiciary rely on assistance from doctors and scientists in this area. Former President of the Austrian Supreme Court Dr Irmgard Griss' lecture argued that while lawmakers are capable of creating an appropriate legal framework, it is the responsibility of the scientific community to come up with ethical guidelines.

Reaping the fruits of these developments will also be a question of economics, said Erwin Streissler, emeritus professor at the University of Vienna. In the future, he pointed out, potential food and water shortages could pose problems for financing medicine that is based on an individualised approach. Annette Widmann-Mauz, Parliamentary State Secretary at the German health ministry, closed by saying that politicians are very interested in the subject of personalised medicine and all its challenges and that the political will was there to address those challenges.

◆ *Authors: Prof. Georg Stingl ML (Vienna), Prof. Martin Röcken ML (Tübingen) und Dr Patrick M. Brunner (Vienna)*

Structures of Rationality in Nature and Culture

The humanities, social and behavioural sciences (Class IV) hold their first symposium

Science is the result of human beings applying their rationality to explain phenomena in a way that everyone could in principle agree with. When scientists and scholars examine rationality itself, they are taking a fundamental instrument of their own work as the subject of their investigation. Aspects of rationality are not only of interest to philosophers and psychologists, but to biologists and neuroscientists, as well: They investigate the evolutionary origins and physiological basis of rational thought and behaviour. The first symposium held by the Leopoldina's Class IV, which took place on 22 November 2011 in Halle, was entitled "Structures of Rationality" and emphasized the importance of work in the humanities and social and behavioural sciences in bridging the gap between the physical world and the mind.

The symposium was held in the auditorium of the Leopoldina's new main building. In four talks and one Leopoldina Lecture, the speakers provided insights into the diversity of topics the members of Class IV deal with in their work, ranging from science philosophical aspects of evolutionary theory and its historical development to the current question of risk assessment by investors. The symposium also focused on how structures of rationality are manifested in biological systems, human behaviour and science itself.

Prof. Martin Weber ML of the University of Mannheim's Business School presented his empirical research on the hot topic of the factors that influence investors' willingness to accept varying levels of risk when making investment decisions. He was able to show that there are two different factors that can be clearly distinguished. The first factor, namely how an individual estimates the chances of making a certain profit from an investment, is variable and changes according to dynamic economic conditions and constraints. The second factor, however – a person's fundamental attitude to economic risk – is determined by their particular biography (whether they experienced an economic crisis during childhood or their teenage

years, for example) and is therefore highly stable over long periods of time.

All human behaviour is the result of highly complex information processing in the nervous system. How these physical processes are connected with our experience of consciousness is one of the central questions of philosophy. Prof. Claude Debru ML, a professor of philosophy at the École normale supérieure in Paris specialising in the history and philosophy of the life sciences, examined this so-called "body-mind problem" from a historical angle on the basis of physiological research on dreaming and waking states in the 20th century. Prof. Debru drew a somewhat critical conclusion in regard to the current relationship between the neurosciences and philosophy, saying that while brain researchers are gaining an ever better understanding of complex cognitive processes, these insights are rarely applied to in-depth analyses of philosophical positions. He also urged neuroscientists to be more careful about using terms without precisely defining them, for example when referring to claimed correlations between brain states and states of consciousness.

Classical philologist Prof. Oliver Primavesi ML of Munich's Ludwig-Maximilians-Universität demonstrated what far-reaching consequences imprecise interpretations of terms can have, taking as an example the history of how classical natural philosophy has been received throughout the ages. On the basis of detailed text interpretations he reconstructed a historical chain of misconceptions about Empedocles' and Aristotle's views on the development of life. The starting point of his exploration was a footnote in Darwin's key work *On the Origin of Species*, in which the father of evolutionary biology acknowledges Aristotle's contribution but states that he did not gain any real insight into the principle of natural selection. Primavesi's demonstration that both Darwin's praise and his criticism could not stand up to scrutiny of the original texts provided a good example of what historical research can contribute to an appropriate understanding of modern science and its complex philosophical founda-

tions

Philosopher of science Prof. Gereon Wolters ML from Constance is also interested in the Darwinian theory of evolution and its difficult relationship to philosophy. The philosophical sub-disciplines of evolutionary epistemology and evolutionary ethics have flourished in recent decades as the significance attributed to evolutionary biology has grown. Wolters pointed out that philosophy scholars have to tread very carefully in their attempts to base philosophical theories on scientific fact. Otherwise they run the danger of taking the answer provided by evolutionary biology on the question of how a cognitive phenomenon of natural history – such as a particular judgement – arises as also being the answer to the question of why this is true in epistemological terms. Wolters also emphasised that *Genese* (genesis) and *Geltung* (effect) should not be regarded as identical for ethical reasons. Altruistic behaviour, for example, brings evolutionary benefits. But the recognition of this fact can in no way replace the reflections of a man who is behaving in an ethical manner on what reasons, generally deemed "right", he has for putting the needs of his fellow humans above his own self-interest.

The main theme of the evening presentation was the biological preconditions for rational behaviour from a cognitive science point of view. Biopsychologist Prof. Onur Güntürkün ML from Ruhr-Universität Bochum shed light on the evolutionary path the brains of birds have taken. Unlike mammals, birds do not have a layered cerebral cortex. However, this does not automatically mean that they are incapable of demonstrating remarkably intelligent behaviour on a level with chimpanzees. Güntürkün showed impressive videos of his experiments with magpies, which demonstrated that it is a mistake to assume that similarly complex behaviours are based on a similar neuronal architecture. (sa)

Events

March

20 March
2.00 p.m.

LEOPOLDINA SYMPOSIUM:

“WELT IM WANDEL - ÜBER DEN UMGANG MIT UNGEWISSHEITEN”. SYMPOSIUM OF THE LEOPOLDINA CLASS I

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

20 March
6.30 p.m.

LEOPOLDINA LECTURE:

PROF. DR. GÜNTHER HASINGER ML, HAWAII: “VON DER ENTSTEHUNG DES UNIVERSUMS BIS ZUR ENERGIEGEWINNUNG - ENERGIEREICHE PLASMEN IM KOSMOS UND AUF DER ERDE”. LECTURE ON THE OCCASION OF THE SYMPOSIUM OF LEOPOLDINA CLASS I

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

22 to 23 March
6.00 p.m.

LEOPOLDINA SYMPOSIUM:

“THE CIRCADIAN SYSTEM: FROM CHRONOBIOLOGY TO CHRONOMEDICINE”

Goethe-Universität, Campus Westend, Hörsaalzentrum, Grüneburgplatz 1, 60323, Frankfurt/Germany

Scientific organization: Horst-Werner Korf ML (Frankfurt)

April

17 April
4.30 p.m.

SEMINAR ON THE HISTORY OF SCIENCE:

DR. SILVIA SCHÖNEBURG, HALLE: “MATHEMATIK IN FORSCHUNG UND LEHRE AN DER UNIVERSITÄT WITTENBERG IM 16. UND 17. JAHRHUNDERT”

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

18 April
6.00 p.m.

LEOPOLDINA LECTURE:

PROF. DR. ZHORES I. ALFEROV, RUSSIA: “SEMICONDUCTOR REVOLUTION OF THE 20TH CENTURY”. LECTURE OF THE RUSSIAN NOBEL LAUREATE, SUPPORTED BY THE

GERMAN FEDERAL MINISTRY OF EDUCATION AND RESEARCH

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

19 April to 15 May

LEOPOLDINA PHOTO EXHIBITION:

“NEW IMAGES OF AGE(ING)”

Haus am Dom, Domplatz 3, 60311 Frankfurt/Germany

20 April
4.00 p.m.

LEOPOLDINA LECTURE:

PROF. DR. ZHORES I. ALFEROV, RUSSIA: “SEMICONDUCTOR HETEROSTRUCTURES: PHYSICS, TECHNOLOGY, APPLICATIONS”. LECTURE OF THE RUSSIAN NOBEL LAUREATE, SUPPORTED BY THE GERMAN FEDERAL MINISTRY OF EDUCATION AND RESEARCH, COOPERATION OF THE TU BERLIN AND THE LEOPOLDINA

TU Berlin, Eugene-Paul-Wigner-Gebäude, Saal EW 201, Hardenbergstraße 36, 10623 Berlin/Germany

23 April to 8 July

4.00 p.m.

EXHIBITION OF THE LEOPOLDINA AND THE STIFTUNG MORITZBURG HALLE (SAALE)

“DAS ANTLITZ DER WISSENSCHAFT. GELEHRTENPORTRÄTS AUS DREI JAHRHUNDERTEN”

Stiftung Moritzburg – Kunstmuseum des Landes Sachsen-Anhalt, Friedemann-Bach-Platz 5, 06108 Halle (Saale)/Germany

May

8 May
4.30 p.m.

SEMINAR ON THE HISTORY OF SCIENCE:

DR. EKKEHARDT KUMBIER, ROSTOCK: “HELMUT RENNERT - PROTAGONIST DER PSYCHIATRIE IN DER DDR?”

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

14 to 16 May

1.30 p.m.

JOINT MEETING OF THE FRENCH ACADEMY OF SCIENCES, THE BRITISH ACADEMY

OF SCIENCES AND THE LEOPOLDINA:

“THE NEW MICROBIOLOGY”

Institute de France, 23 quai de Conti, F-75006 Paris/France

Scientific organization:

Pascale Cossart ML (Paris), Jörg Hacker ML (Halle/Berlin), Jürgen Heesemann ML (Munich)

16 to 19 May

4.30 p.m.

LEOPOLDINA SYMPOSIUM:

“EUROPEAN CALCIUM CHANNEL CONFERENCE”

Congress Centrum Alpach, 246,

A-6236/Austria

Scientific organization:

Veit Flockerzi ML (Homburg), Jörg Striessnig ML (Innsbruck), Klaus Aktories ML (Munich)

24 May

6.30 p.m.

LECTURE:

PROF. DR. WERNER BUSCH, BERLIN: “AUFGEKLÄRTE WISSENSCHAFT UND FREIMAUREREI. DIE LUNAR SOCIETY, DIE PORTRÄTS IHRER MITGLIEDER UND IHRE EXPERIMENTE.”

Stiftung Moritzburg – Kunstmuseum des Landes Sachsen-Anhalt, Friedemann-Bach-Platz 5, 06108 Halle (Saale)/Germany

June

12 June

4.30 p.m.

SEMINAR ON THE HISTORY OF SCIENCE:

PROF. DR. MARGIT SZÖLLÖSI-JANZE, MUNICH:

“NATURWISSENSCHAFT UND DEMOKRATISCHE PRAXIS: FRITZ HABER - ALBERT EINSTEIN - MAX PLANCK”

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

15 to 16 June

LEOPOLDINA SYMPOSIUM:

“RISIKO: ERKUNDUNGEN AN DEN GRENZEN DES WISSENS”

Bonn/Germany

Scientific organization:

Hans-Georg Bohle ML (Bonn)

20 to 22 June

10.00 a.m.

LEOPOLDINA CONFERENCE:

“PHYSIK, PHILOSOPHIE UND FRIEDENS-FORSCHUNG”. CONFERENCE ON THE OCCASION OF CARL FRIEDRICH VON WEIZSÄCKER’S 100TH BIRTHDAY

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany

21 June

4.00 p.m.

CARL FRIEDRICH VON WEIZSÄCKER

AWARD 2012:

AWARD CEREMONY ON THE OCCASION OF THE LEOPOLDINA CONFERENCE “PHYSIK, PHILOSOPHIE UND FRIEDENSFORSCHUNG”. COOPERATION OF THE STIFTERVERBAND FÜR DIE DEUTSCHE WISSENSCHAFT AND THE LEOPOLDINA

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

July

6 July

6.00 p.m.

LEOPOLDINA NIGHT:

ON THE OCCASION OF THE 11TH LONG NIGHT OF SCIENCES IN HALLE

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany

10 July

4.30 p.m.

SEMINAR ON THE HISTORY OF SCIENCE:

PROF. DR. MICHAEL HAGNER ML, ZÜRICH: “GEGENWART UND ZUKUNFT DES WISSENSCHAFTLICHEN BUCHES”

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

September

2 to 7 September

11TH INTERNATIONAL CONFERENCE ON SUBSTORMS:

CONFERENCE OF THE BRAUNSCHWEIG UNIVERSITY AND THE LEOPOLDINA Hotel Bergström, Bei der Lünener Mühle, 21335 Lüneburg/Germany

Scientific organization: Karl-Heinz Glaßmeier ML (Braunschweig)

19 to 22 September

INTERNATIONAL CONFERENCE:

“INNATE IMMUNITY OF THE LUNG - IMPROVING PNEUMONIA OUTCOME”.

CONFERENCE OF THE TRANSREGIONAL COLLABORATIVE RESEARCH CENTER SFB-TR 84 “INNATE IMMUNITY OF THE LUNG” AND THE LEOPOLDINA

Berlin-Brandenburg Academy of Sciences and Humanities, Gendarmenmarkt, Markgrafenstraße 38, 10117 Berlin/Germany

22 to 24 September

9.00 a.m.

LEOPOLDINA’S ANNUAL ASSEMBLY:

“DIE ROLLE DER WISSENSCHAFT IM GLOBALEN WANDEL”

Langenbeck-Virchow-Haus, Luisenstraße 58/59, 10117 Berlin/Germany

Scientific organization: Gunnar Berg ML (Halle), Detlev Drenckhahn ML

(Berlin)

October

3 to 6 October

JENA LIFE SCIENCE FORUM 2012:

“DESIGNING LIVING MATTER – CAN WE DO BETTER THAN EVOLUTION?”.

CONFERENCE OF THE FREGE CENTRE FOR STRUCTURAL SCIENCES OF THE JENA UNIVERSITY, ALFRIED KRUPP VON BOHLEN UND HALBACH-STIFTUNG AND THE LEOPOLDINA

Friedrich-Schiller-Universität Jena, Rosensäle, Großer Sitzungssaal, Fürstengraben 27, 07743 Jena/Germany

Scientific organization: Bernd Olaf Küppers ML (Jena)

9 October

4.30 p.m.

SEMINAR ON THE HISTORY OF SCIENCE:

PROF. DR. LOTHAR PELZ, ROSTOCK: “NS-KINDEREUTHANASIE (1939-1945)”

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

14 to 16 October

7TH HEINRICH F. C. BEHR SYMPOSIUM:

“STAMMZELLEN UND KREBS”

Deutsches Krebszentrum, Im Neuenheimer Feld 280, 69120 Heidelberg/Germany

Scientific organization: Otmar Wiestler ML (Heidelberg)

November

6 November

4.30 p.m.

SEMINAR ON THE HISTORY OF SCIENCE:

PROF. DR. DITTMAR DAHLMANN, BONN: “PETER SIMON PALLAS UND SEIN WISSENSCHAFTLICHES WERK”

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

22 to 24 November

LEOPOLDINA CONFERENCE:

“WISSENSCHAFTSAKADEMIEN IM ZEITALTER DER IDEOLOGIEN. POLITISCHE UMBRÜCHE – WISSENSCHAFTLICHE HERAUSFORDERUNGEN – INSTITUTIONELLE ANPASSUNG”.

CONFERENCE OF THE WORKGROUP “THE HISTORY OF THE LEOPOLDINA IN THE FIRST HALF OF THE 20ST CENTURY” AND THE LEOPOLDINA

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany

December

4 December

4.30 p.m.

SEMINAR ON THE HISTORY OF SCIENCE:

PROF. DR. DR. MARIACARLA GADEBUSCH BONDIO, MUNICH: “UTOPISCHE KÖRPER”

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

People

Deceased Members

Helmut Eschrig ML

2 July 1942 – 22 February 2012 in Dresden/Germany

Physics Section

Eschrig's research in theoretical solid state physics developed calculation methods that enable scientists to predict the electronic structure of unknown solid bodies. His focus was on determining atomic and magnetic structures, chemical bonding forces, and electronic states based on quantum theory. The Leopoldina appointed him a member in 2002 in recognition of his pioneering work in density functional theory.

Har Gobind Khorana ML

9 January 1922 – 9 November 2011 in Concord, MA/USA

Biochemistry and Biophysics Section

The Leopoldina made Khorana a member in 1961 in honour of his research in cell biology, and membrane proteins in particular. 1961 was also the year that Khorana received the Nobel Prize in Medicine for his work on the structure of DNA triplet sequences. Working with Severo Ochoa and Marshall Warren Nirenberg, he reproduced such triplet sequences and showed that their arrangement is not random, but follows a fixed pattern.

Jürgen Krämer ML

5 March 1939 – 7 October 2011 in Bochum/Germany

Surgery, Orthopaedics, Anaesthesiology Section

The clinician, researcher and university lecturer specialised in the orthopaedic treatment of spine and hip ailments. By establishing international networks, Krämer rendered an outstanding service to German orthopaedists. He was elected to the Leopoldina in 1997.

Vasilij V. Kuprijanov ML

1 January 1912 – 3 July 2006 in Moscow/Russia

Anatomy and Anthropology Section

Kuprijanov's research focused on the structure and function of blood vessels in

pulmonary circulation. The Leopoldina made him a member in 1973 in recognition of his insights in this field and for his outstanding teaching.

Hans Mau ML

13 January 1921 – 14 February 2012 in Tübingen/Germany

Surgery, Orthopaedics, Anaesthesiology Section

An important focus of orthopaedist Mau's work was research on scoliosis (abnormal spinal curvature). Among his achievements was the precise characterisation of the term dysostosis (malformation of bone) for specific joints. The Leopoldina made him a member in 1968.

Hilgard O'Reilly Sternberg ML

5 July 1917 – 2 March 2011 Fremont, CA/USA

Earth Sciences Section

O'Reilly Sternberg's research focused on the geomorphology of Brazil and South America. His theories led him to make suggestions for eliminating drought in Brazil by redirecting rivers. They also brought attention to the link between soil degradation and the development of industry and agriculture. The Leopoldina chose him as a member in 1961.

New Members

Erika Fischer-Lichte, Berlin/Germany. Professor of Theater Studies at the Institute of Theater Studies at the Freie Universität Berlin (Cultural Sciences Section)

Luca Giuliani, Berlin/Germany. Professor of Classical Archaeology at Humboldt Universität zu Berlin and dean of the Wissenschaftskolleg zu Berlin (Cultural Sciences Section)

Myles W. Jackson, New York/USA. Professor of the History of Science at the Gallatin School of New York University and head of the Department of Humanities and Social Sciences at the Polytechnic Institute of New York University (History of Science and Medicine Section)

Karl-Heinz Leven, Erlangen/Germany. Professor of the History of Medicine and Director of the Institute of the History and Ethics of Medicine at the Universität Erlangen-Nürnberg (History of Science and Medicine Section)

Kärin Nickelsen, Bern/Switzerland. Professor of the History and Philosophy of Science at the Institute of Philosophy at the University of Bern (History of Science and Medicine Section)

Hermann Parzinger, Berlin/Germany. Professor of Prehistory and Early History and President of the Stiftung Preussischer Kulturbesitz Berlin (Cultural Sciences Section)

Josef Perner, Salzburg/Austria. Professor of Experimental Psychology in the Department of Psychology at the University of Salzburg (Psychology and Cognitive Sciences Section)

Volker Roelcke, Giessen/Germany. Professor of the History of Medicine and Director of the Institute of the History of Medicine at Justus-Liebig-Universität Giessen (History of Science and Medicine Section)

Hans Jürgen Schlitt, Regensburg/Germany. Professor of Surgery and Director of the Surgery Clinic and Polyclinic at the University Hospital Regensburg (Surgery, Orthopaedics, Anaesthesiology Section)

Sabine Sonntag, Mannheim/Germany. Professor of Occupational and Organisational Psychology at the Institute of Psychology at the University of Mannheim (Psychology and Cognitive Sciences Section)

Fritz Strack, Würzburg/Germany. Professor of Psychology at the Institute of Psychology at the University of Würzburg (Psychology and Cognitive Sciences Section)

Elke Weber, New York/USA. Professor of Psychology, Graduate School of Business and Department of Psychology, Columbia University (Psychology and Cognitive Sciences Section)

Marcel Weber, Geneva/Switzerland. Professor of the Philosophy of Science, Department of Philosophy, University of Geneva (Philosophy of Science Section)

Urban Wiesing, Tübingen/Germany. Professor of Ethics in Medicine and Director of the Institute of the Ethics and History of Medicine at the University of Tübingen (Philosophy of Science Section)

Christine Windbichler, Berlin/Germany. Professor of Trade and Business Law, Labour Law and Comparative Law on the Law Faculty at Humboldt Universität zu Berlin (Cultural Sciences Section)



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Nationale Akademie
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Abbreviations
ML = Member of the Leopoldina