

Coping with the Past to Celebrate Its Anniversary

The Max Planck Institute of Psychiatry confronts its history

One hundred years is a reason to celebrate, but also to look back. During this time, much valuable knowledge was amassed at the German Research Institute for Psychiatric Research and at its successor institutions, the Max Planck Institute of Psychiatry and the Max

Planck Institute of Neurobiology. However, during the National Socialist era, scientists at the German Research Institute also participated in planning the systematic extermination of individuals with physical, mental and emotional impairments. They also used human

brain sections from their victims for their research – even after the war had come to an end. In March 2016, it came to light that additional preserved specimens from this time were still held in the archive of the Max Planck Institute of Psychiatry. Consequently, the Directors immediately initiated the creation of an inventory by external experts. In addition, a research program was established with the aim of reconstructing the identity of the Nazi victims.

In his speech at the celebration marking the centenary of the Institute, Max Planck President Martin Stratmann emphasized that transparency and openness for the past had top priority. With an eye to the present day, he admonished: “The thirst for knowledge has its limits. Gaining a scientific edge through human suffering is negligent and absolutely inexcusable.”

Learning from history: At the celebration marking the centenary of the Max Planck Institute of Psychiatry, Max Planck President Martin Stratmann underscored the ethical responsibility of science.



Support for Open Access

Scientific organizations join forces to change the publication market

One year after its launch, the global initiative Open Access 2020 has received additional support. The 13th conference in Berlin in March 2017 brought together around 220 expert representatives from research and research-funding organizations from 34 countries. The focus was on their experiences with the fundamental transformation taking place in the publications market: for example, academic journals for which libraries must currently pay high subscription prices are to become freely accessible for all. “A year ago, we defined a common goal to make Open Access the norm in publishing. Today, the first groundbreaking contractual agreements with major publishing houses are a reality,” says Max Planck President Martin Stratmann, who emphasized that the shift is intended to be accomplished in cooperation with the publishers. Publishing house managers therefore also took part in the conference at which a roadmap for the concrete implementation was further elaborated. In Europe, political support for Open Access has recently grown. The EU ministers responsible for this agreed that, by 2020, all research financed through EU funding must be published in a way that ensures unrestricted access to the publications.



Together for change: The Berlin conference in March was attended by participants from all over the world, such as Louise Page from the US Open Access project Public Library of Science (PLOS).

Photo: Denise Vernillo (top), Georg Botz/CC-BY-SA

“Establishing the principle of excellence was a milestone”

Max Planck Nobel Prize laureate Erwin Neher on the consultations concerning the foundation of the European Research Council (ERC)

Nobel laureate Erwin Neher of the Max Planck Institute for Biophysical Chemistry is one of the pioneers of the European Research Council (ERC). Now in its tenth year, the institution is considered to be an international model for the effective sponsorship of outstanding research. Here, Neher speaks about some of the important decisions that marked the founding years, including a petition without which everything may have turned out differently.

Mr. Neher, you are a scientific researcher to the core – how did you end up in the very different world of research policy?

Erwin Neher: Indirectly, it was thanks to the then President of the EU Commission, Romano Prodi, who in 2000 declared that the European Union should become the world's greatest knowledge-based society. My assessment was quite clear: it takes basic research to create such a knowledge base. The Max Planck Society recommended me as a member of EURAB, the European Research Advisory Board. I was directly involved from 2001 to 2004, when discussions were being held with then EU Research Commissioner Philippe Busquin on how the associated funding should be structured. That's how I got drawn in to the whole business.

So it was a question of perseverance ...

Yes, that's right. After two years of working with EURAB, my experience told me that the existing instruments were beyond repair. We needed something completely new. The classic model was oriented toward the competitiveness of European industry, not toward facilitating entirely new breakthroughs. Breakthroughs don't come when an official body determines what is important for European science and economics and then formulates projects that scientists can apply for. That would mean taking the same approach to research as a contractor building a bridge in Spain. The process must be reversed, as at the national level with the German Research Foundation: it must be the idea that is the decisive factor. The optimum

idea, arrived at through competitive expert evaluation based on criteria of excellence, is the key to new knowledge. The fact that we were able to establish this kind of thinking at the EU level was indeed a milestone.

Was it difficult to communicate this change in perspective?

There were both supporters and critics. The core issue was, can we succeed in maintaining a focus purely on scientific excellence and avoid the dominance of proportionality? The scientific community agreed: the ERC should sponsor projects that originate in the world of science – projects that are high-risk and that are selected solely on the criterion of excellence. What is now universally recognized as a recipe for success was the subject of much dispute at the time.

Was there one specific moment that was decisive?

The discussion about the ERC was a recurrent issue at the EURAB, which directly advised the EU Research Commissioner in Brussels every few months. A situation once arose in which Philippe Busquin somewhat cryptically implied that the ERC was no longer on the list of projects that he wanted to carry through during his term of office. I took the initiative and gathered signatures from 45 Nobel Prize winners. We took the list to Brussels in October 2003, passed it on to Busquin and had a very good meeting. We did the same the following year, when Janez Potočnik of Slovenia had taken office. I believe that helped keep the idea alive. And Potočnik then put his weight behind the establishment of the ERC.

In his role as Max Planck President, Peter Gruss was a strong advocate of the ERC ...

Peter Gruss was very committed. Above all he addressed the issue of how the ERC should be structured in order to be as independent as possible. There were two models embodying different EU regulations. The model chosen came under the



Erwin Neher

aegis of the Commission but ultimately allowed the ERC to have the last word, at least in its scientific decision-making. The success of the project was certainly influenced by the efforts of Ernst-Ludwig Winnacker, the first Secretary General, and Fotis Kafatos, the first Chairperson of the Scientific Council. And the first 26 members of this body also played an important role. So the ERC had numerous founding fathers, as is usually the case with successful undertakings.

How would you rate the ERC today?

Given the previous EU funding for research, the ERC is a huge step forward, particularly for basic research. Thanks to the Scientific Council tying down the funding strands in the early years, beginning with the Starting Grants, then introducing the Advanced and Consolidator Grants, a broad spectrum within the span of an average scientific career is now covered. Of course, there is criticism of the bureaucracy, I hear it from colleagues who have ERC Grants. But overall it is a very good program that promotes truly top science. And of course I am happy to have had a part in it.

Interview: Jens Eschert

New Ties to the Netherlands and China

Two Max Planck Centers established in the fields of fluid dynamics and regenerative medicine

With partners in Guangzhou, China, and Enschede in the Netherlands, the Max Planck Society has founded two new Max Planck Centers. In the Center at the University of Twente, the Max Planck Institutes for Polymer Research and for Dynamics and Self-Organization will cooperate with two University groups. This will result in a pioneering center for the research of complex fluid dynamics – the movement in liquids and gases – which plays a central role in numerous natural and industrial processes. The Center is set to improve the teamwork of the partners and will enable the common usage of research infrastructures. The results are expected to facilitate, for example, advances in medical diagnostics and in the operation of wind turbines.

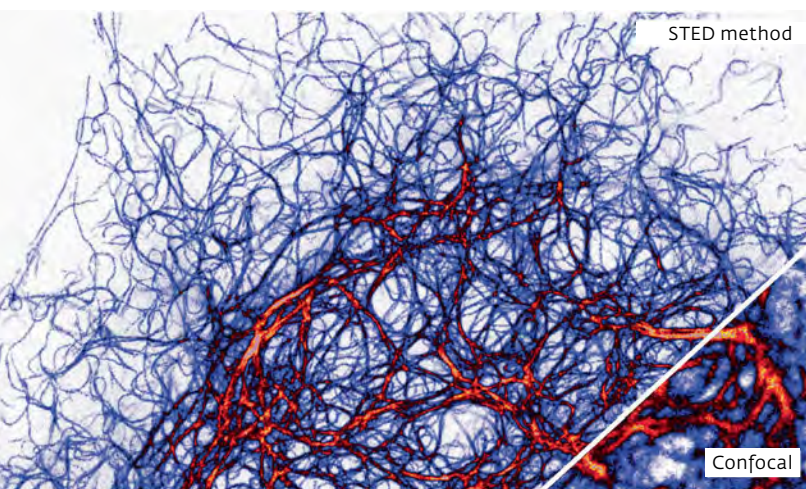
A further Center is being established in Guangzhou, China. There, the Max Planck Institutes for Molecular Biomedicine and for Heart and Lung Research will join forces with the Guangzhou Institute of Biomedicine and Health of the Chinese Academy of Sciences. Their common goal is to advance research into reprogrammed stem cells and provide new impetus for regenerative medicine. Both Centers will also serve to promote international exchange among talented young scientists.

Full of praise: At the opening of the Max Planck Center at the University of Twente, Max Planck President Stratmann acknowledged the high level of Dutch research and referred to the joint undertaking as a milestone for European science.



Technology Transfer across the Atlantic

Florida to become the American location for award-winning microscopy



Clear image: With the STED method, processes in living cells can be observed in far greater detail than with the confocal microscopes that are frequently used for research purposes (bottom right).

Abberior Instruments, the company owned by Max Planck Nobel Prize laureate Stefan Hell and headquartered in Göttingen, has founded a subsidiary in the US. Abberior produces microscopes based on the STED method Hell developed, which can be used to create high-resolution fluorescence images far below the diffraction limit. The campus of the Max Planck Florida Institute for Neuroscience was chosen as the location for the US center of operations. David Fitzpatrick, CEO and scientific Director of the Institute, is hopeful that this will also give the research a boost. “The latest improvements for this ultra-high resolution microscopy are the key to insightful discoveries in brain research and other areas,” says Fitzpatrick. “The entire American life science industry will benefit from having better access to this technology.” Stefan Hell stresses the strong scientific reputation of the campus in Jupiter. In addition to the Max Planck Institute, the campus is also home to Florida Atlantic University and a branch of The Scripps Research Institute.

The Dilemma of Animal Research

Forum held at Max Planck Administrative Headquarters discusses animal ethics in science and society

In a declaration of principle on animal experimentation in basic research, the Max Planck Society has committed itself to strengthening transparency and communication regarding this controversial subject. To this end, a podium discussion was held in January at the Max Planck Society's Administrative Headquarters in Munich. Before an audience of 100 guests, two Max Planck Directors – brain researcher Wolf Singer and lawyer Anne Peters – and philosopher Dieter Birnbacher from Heinrich Heine University Düsseldorf discussed issues focusing on animal ethics. The starting point was the special nature of basic research: intrinsically a core value, constitutive for humanity, emphasized Singer. Birnbacher reinforced this, additionally stressing the application factor. Scientists must weigh up the knowledge gained and the possible benefit of their projects against the welfare of the animal. Peters pointed out the importance of defined criteria. For example, the EU guidelines on animal welfare stipulate the extent to which an animal may be stressed and that, in retrospect, these stress factors must be evaluated in proportion to the gain in scientific insight. Singer added that, owing to the extremely subject-specific reasons for animal research, it was necessary to have trust in the scientists. This is possible only through transparency.



Careful consideration: Moderated by science journalist Christina Berndt (center), Dieter Birnbacher, Wolf Singer and Anne Peters (from left) discussed animal research in light of ethical considerations.

On the Net



Smelly spectacle

The Max Planck Institute for Chemical Ecology in Jena was host to a very rare – and very stinky – event on the weekend of June 9-10, 2017. One of the world's smelliest flowers, *Amorphophallus titanum*, went into bloom for the first time in 14 years. The odoriferous plant, whose native habitat is Sumatra, Indonesia, is also known as the corpse flower because of its putrid aroma that proves irresistible to certain pollinators. About 1,000 flower lovers came to catch a glimpse – as well as a good whiff – of the plant after it was moved out into the open from the Institute's greenhouses.
www.ice.mpg.de/webcam/2017/05/amorphophallus/a_titanum_1080p.mp4

How Diseases Spread

Richard Neher from the Max Planck Institute for Developmental Biology, together with Trevor Bedford from the Fred Hutchinson Cancer Research Center in Seattle, was awarded the Open Science Prize. The two scientists are receiving the prize for their online tool nextstrain.org, with which the evolution and spread of pathogens such as Ebola and Zika can be monitored in real time. "The Ebola epidemic made clear to us just how useful a platform would be with which propagation pathways can be observed live," explains Richard Neher, who recently took a position at the Center for Molecular Life Science at the University of Basel.
www.nextstrain.org

Protection for Chimpanzees

To save western chimpanzees from extinction, Max Planck Director Christophe Boesch founded the Wild Chimpanzee Foundation 16 years ago. The non-profit organization campaigns to protect chimpanzees in the Ivory Coast, Guinea and Liberia. The research projects of the behavioral scientists at the Max Planck Institute for Evolutionary Anthropology also help to develop optimum protective measures. We talked to Boesch about the political situation in those countries, the role played by ecotourism, and cooperative projects with schools.
www.mpg.de/11074475/interview-boesch-chimpanzees