

## Foreword by the President

Two events were particular highlights of the year 2016, both attended by prominent political figures. In February, the first hydrogen plasma was ignited at the Max Planck Institute for Plasma Physics (IPP) in Greifswald. Federal Chancellor Angela Merkel actually pushed some buttons herself – she personally flipped the switch to generate the machine’s first hydrogen plasma. The Wendelstein 7-X fusion reactor is a milestone in plasma physics and engineering, and one of the most promising future sources of sustainable energy supply in the 21st century. Merkel emphasized that every step taken on the long road towards fusion power was a success.

The second milestone event was the ‘Cyber Valley’ initiative, launched by the Minister President of Baden-Württemberg, Winfried Kretschmann, in December 2016. Cyber Valley brings together the Max Planck Institute for Intelligent Systems, the State of Baden-Württemberg, and the Universities of Stuttgart and Tübingen along with Bosch, Daimler, Porsche, BMW, ZF Friedrichshafen and Facebook in a combined effort to intensify their research and development in the field of artificial intelligence. This endeavour will create one of Europe’s largest AI research pools, in which the state will invest over 50 million euros in the coming years.

The subject of animal research also had high priority in 2016. In November, the Max Planck Society’s Senate unanimously adopted the objectives of a policy document on animal experiments. In many of the research areas of the Max Planck Society, the use of laboratory animals will continue to be indispensable for the foreseeable future. In its White Paper, the MPG therefore resolved to pursue a series of measures aimed at achieving the best possible compromise between the stresses placed on animals and the knowledge gained in experiments. The policy and

accompanying measures are intended to support members of staff in fulfilling this responsibility both in practical day-to-day research and in contact with the public.

Research findings such as those achieved at the Max Planck Institute for the Biology of Aging also show that especially in the field of stem cell research new options are emerging to reduce the number of animal experiments ([www.mpg.de/10865430/](http://www.mpg.de/10865430/)). To develop new treatments for skin cancer, for example, researchers must test medications on the skin of animals. However in 2016, scientists in Cologne succeeded in growing skin stem cells of mice in a petri dish. In future, the cultivated stem cells could replace many animal experiments.

The following pages will outline once more the results of deliberations by the Presidential Committee established by me, and I hope that you will find them of interest.

**Sincerely,  
Martin Stratmann**