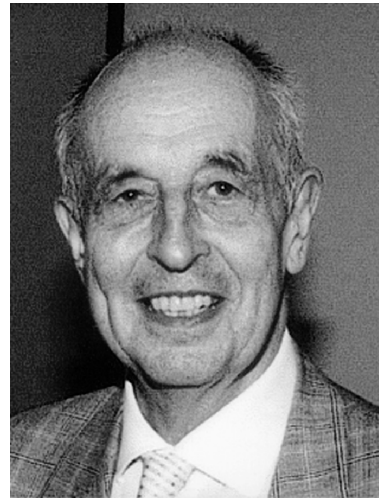


Obituary

In Memoriam

Peter Hans Hofschneider (1929–2004)

Prof. Dr. Dr. Dr. h.c. Peter Hans Hofschneider, former director at the Max-Planck-Institute of Biochemistry in Martinsried, died on July 23 at the age of 75. With him we lost one of the most important pioneers in German molecular biology and a major leader in the field of molecular medicine. Peter Hans Hofschneider was one of the first scientists to realize the potency of molecular biology in the study of disease mechanisms and for the development of novel diagnostic tools and specific therapeutics for major human diseases.



Peter Hans Hofschneider obtained a Dr. Phil. from the University of Heidelberg and an M.D. from the University of Tübingen, Germany. After an education in clinical medicine in Zurich, Freiburg and Basel, he started a career as a basic scientist at the Max-Planck-Institute of Biochemistry in Martinsried. He was one of the first to use modern molecular biology to study bacteriophages and subsequently animal viruses. In the early years of his scientific career, but still as a director at the Max-Planck-Institute of Biochemistry, Peter Hans Hofschneider was devoted to solving the structures and replication mechanisms of bacteriophages. He was able to show that the single-stranded genomes of DNA and RNA phages replicate via double-stranded intermediates. The latter were designated HF form (Hofschneider Form) by Saul Spiegelman. Of particular importance was the isolation of bacteriophage M13 (Munich 13) by Peter Hans Hofschneider. In collaboration with other research groups, this phage was used to develop one of the first cloning vectors, and part of its genome is still present in most of the cloning vectors used nowadays.

In the early seventies, Peter Hans Hofschneider changed the focus of his research to the study of viruses that cause human disease. Most of his work focused on the role of hepatitis B virus in the pathogenesis of liver cancer. His major goal was the search for virus proteins that have cancer-promoting effects in animals and humans. Through the discovery of trans-activating activities of hepatitis B virus proteins associated with the development of hepatocellular carcinoma, he demonstrated the validity of his scientific approach. This discovery opened new avenues for the study of virus-induced liver cancer and for the development of novel and more effective therapeutics.

In addition to his work on hepatitis virus, several other projects in the field of molecular medicine were carried out in the Department of Peter Hans Hofschneider. These included (i) the characterization of the role of picornavirus infections in the pathogenesis of myocarditis, (ii) the analysis of the mechanisms involved in the persistence of paramyxoviruses, including measles virus, (iii) studies on the molecular pathogenesis and cell biology of Kaposi's sarcoma, a normally rare tumour that frequently affects AIDS patients, and (iv) the

characterization of the molecular mechanisms underlying tissue repair processes. During the past few years, he was also strongly involved in the development of gene therapy approaches to the treatment of liver tumours using recombinant hepatitis B virus as a vector. These projects, which resulted in more than 300 publications by Peter Hans Hofschneider, are now carried on by some of his previous co-workers and by his collaborators in academia and industry.

It was always his opinion that substantial progress in medicine is only possible through synergism and close interaction between theoretical and applied medicine and through close collaboration among basic scientists, clinicians and industrial partners. As a major example for such a successful interaction, he initiated and co-ordinated a multi-centre study in the area of rheumatology and autoimmune disease, which was funded by the German Ministry for Education and Research (BMBF). This resulted in very fruitful collaborations between clinicians and basic scientists. A major result of this successful project was the development of novel therapeutic approaches for rheumatoid arthritis based on the use of gamma-interferon. The high scientific quality of this project has been recognised by various international experts. The project can therefore be seen as a model for the promotion of clinically relevant research.

Significant progress in the field of molecular medicine requires major industrial commitments. Peter Hans Hofschneider contributed strongly to the initiation and promotion of academic-industrial collaborations. Besides the involvement in various research collaborations with different companies, he was a co-founder of Biogen, a major US biotechnology company, and recently also of Mondogen, a German biotechnology company. In addition, he was responsible for the successful establishment of industry-funded research groups at universities and other research institutions.

Peter Hans Hofschneider devoted his life to science and to the service of the scientific community. He was the Chair of the Max-Planck-Institute of Biochemistry in Martinsried for several years, for one period of office the head of the biological-medical section of the Max-Planck-Society, for three years the head of the scientific council of the Max-Planck-Society, and a member of numerous boards of funding agencies, research institutes and scientific journals. His scientific achievements and his services to the scientific community were honoured by various prestigious awards, including the Gerhard-Domagk Award for Cancer Research, the Award of the Friedrich-Sasse-Foundation, and the Jacob-Henle Medal. In 2002, he obtained an honorary doctorate from the University of Witten-Herdecke.

During his last years, he was strongly involved in scientific ethics. In particular, he helped to uncover several cases of scientific fraud and to set up regulations for the prevention and handling of scientific misconduct.

Peter Hans Hofschneider was an outstanding academic teacher and mentor, and he supported and promoted a large number of young scientists, including medical doctors and basic cell and molecular biologists. His creativity, his sense for humour and his enthusiasm for science, in particular for molecular medicine, were extremely motivating for his co-workers. Many of them now hold leading positions at universities, research institutions, hospitals or in industry in several countries. For them and all other co-workers, collaborators, colleagues, and friends, Peter Hans Hofschneider will remain unforgettable.

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