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## Curriculum Vitae Professor Dr. F. Ulrich Hartl

**Name:** Franz-Ulrich Hartl  
**Born:** 10 March 1957



Image: MPI for Biochemistry

**Research Priorities: Proteins, protein folding, molecular chaperones, heat shock proteins, causes of neurodegenerative diseases such as Dementia, Alzheimer's, Parkinson's and Huntington's disease.**

F. Ulrich Hartl investigates proteins, especially protein folding. He was able to prove that folding is mediated by certain “helper molecules” (molecular chaperones). Since misfolded proteins are also causes of neurodegenerative diseases, his findings contribute to a better understanding of the development of diseases.

### Academic and Professional Career

2002	Managing Director, Max Planck Institute for Biochemistry, Martinsried, Germany
since 1997	Director, Max Planck Institute for Biochemistry, Martinsried, Germany
1994 - 1997	Associate Investigator, Howard Hughes Medical Institute, Chevy Chase, USA
1993 - 1997	Member (with tenure), Program in Cellular Biochemistry and Biophysics, Sloan Kettering Institute, New York, Professor of Cell Biology and Genetics, Cornell University, Graduate School of Medical Sciences, New York, USA
1991 - 1992	Associate Member, Program in Cellular Biochemistry & Biophysics, Sloan-Kettering Institute, New York, Associate Professor of Cell Biology and Genetics, Cornell University, Graduate School of Medical Sciences, New York, USA
1990 - 1991	“Akademischer Rat”, Institute of Physiological Chemistry, University of Munich, Germany

- 1990 Dr. med. habil., Institute of Physiological Chemistry, University of Munich, Germany; Chair of Prof. W. Neupert. Title: Topogenesis of Mitochondrial Proteins: Mechanisms of Sorting and Assembly of Proteins into the Mitochondrial Subcompartments
- 1989 - 1990 Postdoctoral Fellow in the laboratory of Prof. W. Wickner, University of California, Los Angeles, USA; Fellow of the Deutsche Forschungsgemeinschaft (German Research Council)
- 1987 - 1989 Group leader, Institute of Physiological Chemistry, University of Munich, Germany
- 1985 - 1986 Postdoctoral Fellow in the laboratory of Prof. W. Neupert, Institute of Physiological Chemistry, University of Munich, Germany
- 1985 Dr. med., University of Heidelberg, Germany; Laboratory of Prof. H. Schimassek, Institute of Biochemistry. Title: The Regulation of Rat Liver Peroxisomal Metabolism by Thyroid Hormones
- 1982 M.D., University of Heidelberg Germany

#### **Honours and Awarded Memberships (Selection)**

- 2023 Schleiden Medal, German National Academy of Sciences Leopoldina
- 2021 Bavarian Maximilian Order for Science and Art
- 2019 Paul Ehrlich- und Ludwig Darmstaedter-Preis
- 2016 Ernst Schering Prize
- 2016 Albany Medical Center Prize
- 2012 Shaw Prize in Life Science and Medicine, Hong-Kong, China
- 2012 Elected Fellow of the American Academy of Microbiology
- 2011 Heinrich Wieland Prize of the Boehringer Ingelheim Foundation
- 2011 Massry Prize, Los Angeles, USA
- 2011 Lasker Award for Basic Medical Research, New York, USA
- 2011 Foreign Associate of the National Academy of Sciences, USA
- 2010 Order of Merit of the Federal Republic of Germany
- 2010 Dr H.P. Heineken Prize for Biochemistry and Biophysics, Royal Netherlands Academy of Arts and Sciences
- 2010 Twenty-Seventh Annual Cynthia Ann Chan Memorial Lecture, University of California, Berkeley, USA
- 2010 van Gysel Prize for Biomedical Research in Europe – 2009

- 2010 Election to AAAS Fellow, USA
- 2009 Otto Warburg Medal of the German Society for Biochemistry and Molecular Biology (GBM)
- 2008 Honorary Member, Japanese Biochemical Society
- 2008 Louisa Gross Horwitz Prize
- 2008 Lewis S. Rosenstiel Award
- 2007 Wiley Prize in Biomedical Sciences
- 2006 Koerber European Science Award
- 2006 Stein and Moore Award of the Protein Society
- 2005 Ernst Jung Prize for Medicine
- 2004 Gairdner Foundation International Award, Canada
- 2004 Member, Bavarian Academy of Sciences, Germany
- 2003 Feldberg Prize
- since 2002 Member, German National Academy of Sciences Leopoldina, Germany
- 2002 Gottfried Wilhelm Leibniz Prize, Deutsche Forschungsgemeinschaft (German Research Council)
- 2000 Foreign Honorary Member, American Academy of Arts and Sciences, USA
- 2000 Wilhelm Vaillant Research Prize
- 1999 Academy Prize of the Berlin-Brandenburg Academy of Sciences and Humanities, Germany
- 1998 EMBO Member
- 1997 Foreign Member of the Academy of Science of Nordrhein-Westfalen, Germany
- 1997 Honorary Professor, University of Munich, Germany
- 1997 Lipmann Award, American Society of Biochemistry and Molecular Biology, USA
- 1996 Vinci Award, LVMH Science for Art competition
- 1995 Appointment to William E. Snee Chair of Cellular Biochemistry at Sloan-Kettering Institute, New York, USA
- 1994 Howard Hughes Appointment

## Research Priorities

F. Ulrich Hartl investigates proteins, especially protein folding. He was able to prove that folding is mediated by certain “helper molecules” (molecular chaperones). Since misfolded proteins are also causes of neurodegenerative diseases, his findings contribute to a better understanding of the development of diseases.

Proteins serve many purposes within the cell. In order to do so, however, they have to fold into a complex three-dimensional structure. Any errors during folding may lead to neurodegenerative diseases such as Parkinson's disease or dementia. F. Ulrich Hartl has found that the cell employs “helper molecules” to avoid errors during folding. These chaperones interact with proteins and ensure that they fold into their correct shape. The precise mechanism has not yet been elucidated.

These chaperones are also called heat shock proteins because their formation is increased under stress and fever. With his team, Hartl has elucidated the function and structure of heat shock proteins (Hsp70, Hsp60). One example of such a protein is the eye-lens protein  $\alpha$ B-crystallin. It ensures that the protein mixture within the lens remains clear and translucent. If the mechanism fails, the lens becomes cloudy, and cataracts develop. Misfolding generally plays a crucial role in the aging process and the development of age-related diseases. Hartl wants to find out why the activity of the chaperones decreases with age and what can be done to increase it again.

With his research group, Hartl is also investigating the influence of chaperones in Huntington's disease or Creutzfeldt-Jacob disease. His results provide insights into disease causes, offer opportunities for new therapies, and are important for the biotechnological production of proteins.