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Paul Ehrlich- and Ludwig Darmstaedter-Prize for F.-Ulrich Hartl

F.-Ulrich Hartl, Director at the Max Planck Institute of Biochemistry in Martinsried near Munich, is awarded the Paul Ehrlich- and Ludwig Darmstaedter-Prize 2019 together with Arthur L. Horwich, of Yale School of Medicine/HHMI. The biochemist Hartl and the geneticist Horwich are honored for their pioneering work in the field of cellular protein chemistry. Their collaboration helped unravel the molecular machinery that assists protein folding. The prize will be awarded on March 14 in the St. Paul's Church in Frankfurt and is endowed with 120,000 EUR.

Proteins are small molecular machines within each cell and take over a variety of tasks. Newly produced immature chain-like proteins have to fold into a specific, three-dimensional structure. In the 1980s, Hartl and colleagues, in collaboration with Horwich, demonstrated that proteins do not fold spontaneously. Rather, they need assistance in their folding process by so-called molecular chaperones. At the time, this finding contradicted the general dogma.

The scientists discovered that certain chaperones are cage-like 'folding machines'. They offer a protected environment to newly produced proteins, allowing them to fold into their correct functional structure. Misfolded proteins clump together to form toxic aggregates and are one of the main causes of severe neurodegenerative disorders such as Alzheimer's disease or Parkinson's disease. Furthermore, protein misfolding plays an essential role in aging.

The Paul Ehrlich and Ludwig Darmstaedter Prize honors scientists who have earned particular merit in the fields of research represented by Paul Ehrlich.

Further information can be found in the press release of the Paul Ehrlich Foundation (in german): [here](#)





About F.-Ulrich Hartl

F.-Ulrich Hartl was born in 1957. He studied Medicine at the University of Heidelberg, where he also obtained his doctoral degree. Hartl joined Walter Neupert's research group at LMU as a postdoc and then became a group leader in Neupert's department. A fellowship from the German Research Foundation (DFG) enabled him to undertake research at the University of California, Los Angeles. He did research as a Professor and Howard Hughes Medical Investigator at the Sloan Kettering Institute and Cornell University in New York, USA. In 1997, the Max Planck Society succeeded in enticing the renowned scientist back to Germany. Since then, he has been Director and head of the Department of Cellular Biochemistry at the Max Planck Institute of Biochemistry. Within the last years he was honored with multiple scientific prizes including 2002 the Gottfried Wilhelm Leibniz Prize, 2011 the Albert Lasker Award for Basic Medical Research, 2012 the Shaw Prize together with Horwich and 2016 the Albany Medical Center-Prize together with Horwich and Susan Lee Lindquist. In 2018, Hartl was inducted into the Hall of Fame of German Research.

Further information on research by F.-Ulrich Hartl

Movie: Protein Folding (German): <https://youtu.be/nEHe3Aie9Ek>

Movie: Chaperone – Faltungshelfer in der Zelle (German): <https://youtu.be/ORdYLVUs0M>

Movie: Chaperones - Folding helper in the cell (English): <https://youtu.be/XKiwOZ3oVJw>

About the Max Planck Institute of Biochemistry

The Max Planck Institute of Biochemistry (MPIB) belongs to the Max Planck Society, an independent, non-profit research organization dedicated to top level basic research. As one of the largest Institutes of the Max Planck Society, 850 employees from 45 nations work here in the field of life sciences. In currently eight departments and about 25 research groups, the scientists contribute to the newest findings in the areas of biochemistry, cell biology, structural biology, biophysics and molecular science. The MPIB in Munich-Martinsried is part of the local life-science-campus where two Max Planck Institutes, a Helmholtz Center, the Gene-Center, several bio-medical faculties of two Munich universities and several biotech-companies are located in close proximity. <http://www.biochem.mpg.de>





Caption:

F.-Ulrich Hartl

Photo: Susanne Vondenbusch © MPI of Biochemistry

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