



## Curriculum Vitae Professor Dr Pierluigi Nicotera



Image: Markus Scholz | Leopoldina

**Name:** Pierluigi Nicotera

**Born:** 27 March 1956

### **Research Priorities: Biomedicine, neurodegenerative diseases, molecular toxicology, neural cells**

Pierluigi Nicotera is an Italian medical scientist. He studies neurodegeneration, which is the progressive decline of neural cells. Neurodegenerative processes are considered the cause of numerous diseases of the central nervous system.

### **Academic and Professional Career**

- since 2009 Founding Director, German Center for Neurodegenerative Disease (DZNE), Bonn, Germany
- 2002 - 2009 Director, Medical Research Council (MRC) Toxicology Unit and Honorary Professor of Neuroscience, University of Leicester, Leicester, UK
- 2005 - 2008 Teaching Professor of Toxicology, Università degli Studi di Siena, Siena, Italy
- 1996 - 2002 Adjunct Professor of Toxicology, Karolinska Institutet, Stockholm, Sweden
- 1995 - 2000 Professor of Molecular Toxicology, Universität Konstanz, Konstanz, Germany
- 1989 - 1994 Senior University Lecturer, Karolinska Institutet, Stockholm, Sweden
- 1992 Lecturer in Molecular Toxicology, Karolinska Institutet, Stockholm, Sweden
- 1986 - 1989 Research Assistant Professor, Karolinska Institutet, Stockholm, Sweden
- 1987 Consultant, Cardiology, Medical School, University of Pavia, Pavia, Italy
- 1986 PhD, Karolinska Institutet, Stockholm, Sweden
- 1982 - 1986 Studies in Human Medicine, Discipline of Cardiology, University of Pavia, Pavia, Italy

### **Functions in Scientific Societies and Committees**

- since 2014      Member, World Dementia Council
- since 2009      Chairman, Executive Board and Scientific Director, DZNE, Bonn
- since 1997      Member, Editorial Board, Neuron

### **Project Coordination, Membership in Collaborative Research Projects**

- 2012 - 2018      Participating Researcher, Clusters of Excellence (EXC) 1023 "ImmunoSensation: The Immune Sensory System", German Research Council (DFG), Germany
- 2007 - 2018      Participating Researcher, EXC 229 "Cellular Stress Responses in Aging-Associated Diseases", DFG, Germany
- 2001 - 2004      Participating Researcher, Research Training Groups (GRK) 702 "Biomedical Drug Research", DFG, Germany
- 1998 - 2004      Participating Researcher, Research Unit (FOR) 324 "The Role of Nucleocytoplasmic Transport in Apoptosis" („Die Rolle des nukleozytoplasmatischen Transportes in der Apoptose“), DFG, Germany
- 1997 - 2001      Applicant, Project "Molecular Mechanisms of Neuronal Apoptosis in Models of Toxic Glutamate-mediated hyperstimulation" („Molekulare Mechanismen der neuronalen Apoptose in Modellen der toxischen Glutamat-vermittelten Überstimulation“), DFG, Germany

### **Honors and Awarded Memberships**

- 2017              XXVIII Ottorino Rossi Award, Fondazione Mondino, Istituto Neurologico Nazionale a Carattere Scientifico (IRCCS), Pavia, Italy
- since 2016      Member, German National Academy of Sciences Leopoldina. Germany
- 2013              Chancellor's Award Lecture in Neuroscience, Neuroscience Center of Excellence, Louisiana State University (LSU) Health Sciences Center, New Orleans, USA
- 2012              Honorary Citizenship and Keys to the City, New Orleans, USA
- 2010              Gerolamo Cardano International Prize, University of Pavia and Rotary Club Pavia, Pavia, Italy
- 2003              Chancellor's Award Lecture in Neuroscience, Neuroscience Center of Excellence, LSU Health Sciences Center, New Orleans, USA
- 1999              Jacob Hooisma Honorary Lecture, 7th Meeting of the International Neurotoxicology Association, Leicester, UK

- 1995 EUROTOX Award Lecture, 1st G. Zbinden Memorial Lecture Award, Prague, Czech Republic
- 1992 ILSI Research Foundation U.S.A. Award, International Life Sciences Institute (ILSI)

### Research Priorities

Pierluigi Nicotera is an Italian medical scientist. He studies neurodegeneration, which is the progressive decline of neural cells. Neurodegenerative processes are considered the cause of numerous diseases of the central nervous system.

In his research, Pierluigi Nicotera focuses among other things on neuronal connectivity. Here, synapses – the connections between neural cells – are of special importance as they facilitate the transfer of information in the brain. A loss of synaptic connections in the brain induced by age or illness leads to changes in the brain and therefore to cognitive impairment. Pierluigi Nicotera uses the study of the molecular mechanisms which lead to processes of alteration and degradation to understand the development of neurodegenerative diseases like Alzheimer’s disease, dementia, Parkinson’s disease, or Huntington’s chorea. This approach enabled him and his team to show that, for example during Huntington’s disease, a renewal of the “recycling programme” of synaptic vesicles can prevent the destructive process at certain parts of the synapses (dendrites). Furthermore, he studied both the influence of Calcium-streams and of genetic factors on the preservation of synaptic plasticity.

As the scientific director of the German Center for Neurodegenerative Diseases (DZNE), he also built an Institute at which researchers from ten different sites cooperate and whose structure became a model for similar institutions around the world.

As a researcher and research manager, Pierluigi Nicotera made important contributions to the identification of starting points for the development of new therapies. He aims to preserve neural connectivity and contain the spread of Alzheimer’s disease and Parkinson.