

ERWIN NEHER



German Nobel Prize Laureate biophysicist

German biophysicist Erwin Neher was awarded the Nobel Prize in Medicine, together with Bert Sakmann, for discovering the function of ion channels in cells and for the development of the patch clamp measurement technique in 1991.

CAREER

Erwin Neher was born in Landsberg am Lech in 1944. He enrolled at the Munich Technical College in 1963, majoring in physics. After obtaining a BSc degree, he went to the University of Wisconsin on a Fulbright scholarship.

In 1967, he returned to Munich, where he began research on the synapses of nerve cells and the ionic currents in their membranes at the Max Planck Institute of Psychiatry. There he met Bert Sakmann, a PhD student working on a similar topic. After obtaining his doctorate, he continued his work at the Max Planck Institute in Göttingen with Bert Sakmann from 1973. Together, they began to develop a technique to measure the function of a single ion channel in a cell; the result of their work, the patch clamp method, was finally published in 1976.

The Institute's management provided them with a separate laboratory where they refined the method. After 1983, his interest turned from ion channels to the inside of the cell, and he investigated cellular responses to nerve stimuli such as hormone secretion and neurotransmitter secretion. In 1991 Erwin Neher and Bert Sakmann won the Nobel Prize for Medicine, for discovering the function of ion channels in cells and for the development of the patch clamp measurement technique.

PROFESSIONAL ACHIEVEMENTS

- Former Professor at the University of Göttingen
- Former director of the European Neuroscience Institute in Göttingen
- 1977 - German Society of Physicochemistry Award
- 1982 - New York Academy of Sciences Lamport Prize
- 1983-2011 - Head of the Department of Membrane Biophysics at the Max Planck Institute for Biophysical Chemistry
- 1986 - Columbia University Gross-Horwitz Prize
- 1986 - German Leibniz Prize
- 1991 - American Neuroscience Association Gerard Prize
- 1991 - Nobel Prize in Medicine
- 1993 - Honorary Doctorate from the University of Alicante and the University of Wisconsin
- 1994 - Honorary Doctorate of the University of Munich
- 1994 - Honorary Doctorate, University of Madrid
- 1994 - Honorary Doctor of Huazhong University, China
- 1995 - Honorary Doctorate from the University of Bahía Blanca, Argentina
- 1996 - Honorary Doctorate of the University of Rome
- 1999 - Honorary Doctorate of the Hebrew University of Jerusalem