



## News release

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Hansen Family Prize awarded for the third time

### **Understanding the formation of neural networks**

Neurobiologist Dr. Rüdiger Klein receives EUR 50,000

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**Leverkusen** – At a ceremony held at the Bayer Communication Center in Leverkusen on January 12, 2005, neurobiologist Dr. Rüdiger Klein (46) from Munich, Germany, was awarded the Hansen Family Prize for his special contribution to biology and medicine. A director of the Max Planck Institute in Martinsried, Dr. Klein was honored for his research into the function of nerve growth factors and their intracellular signal transduction channels. The prize, worth EUR 50,000, is one of the highest accolades for scientists working in the fields of biology and medicine in Germany.

In his speech at the award ceremony, Bayer CEO Werner Wenning emphasized the importance of research and development for Germany. “In my view, the quality of research in Germany is one of the country’s key competitive advantages in international terms. Without this inventive spirit, German industry would certainly not be able to maintain its impressive track record on global markets.” According to Wenning, Dr. Klein has delivered impressive evidence of Germany’s high scientific standards and he considers it essential to preserve this capital in the future. “Ultimately, high incomes and high levels of employment can only be guaranteed if there is continued investment in education, science, research and technology,” concluded Wenning. However, he considers Germany’s present R&D spending of just 2.5 percent of gross national product is simply not high enough when compared with other countries. Wenning went on to say that Bayer plans to invest some EUR 2 billion in R&D this year, around 60 percent of which will be spent in Germany.

To help foster innovation, Wenning demanded a clear political and legislative framework. Also needed is a fundamental public acceptance of new technologies. “Compared with technology-friendly countries like the United States, Germany views any new technology as a risk rather than as a positive opportunity that should be seized as a means of boosting growth and safeguarding the nation’s future,” said the Bayer CEO.

The Prize was presented by Dr. Udo Oels, Bayer board member with responsibility for Innovation, Technology and Environment. In his laudation, Dr. Oels commented: “Understanding the processes investigated by Dr. Klein is of great significance in unlocking the complex interactions between biological cells during the development of organisms. This will provide the basis for new therapeutic approaches.”

In his work, Dr. Klein discovered a receptor for the nerve growth factor NGF. The focus of a long search by scientists, this receptor plays a key role in the survival of nerve cells and the formation of neural networks.

The latter are crucial for coordinating complex processes in the body – such as walking. Thread-like extensions of the nerve cells (axones) are channeled to the target cells. If the axone finds the right cell, the receptor identified by Dr. Klein is stimulated and the nerve cell survives. However, if the axone makes contact with the wrong cell, other receptors are activated. Contact with the cell is broken off and the axone searches for a new target.

Rüdiger Klein was born on March 24, 1958 in Nickenich in the Eifel region of Germany. After graduating from high school in Andernach, he studied biology at the universities of Marburg (Germany), Pennsylvania (USA) and Tübingen (Germany). He obtained his PhD at Germany’s Federal Research Institute for Viral Diseases before returning to the United States for a series of post-doc positions, including a spell with the pharmaceuticals company that was then called Squibb. In 1993, Dr. Klein took up a post as a team leader at the European Molecular Biology Laboratory in Heidelberg, Germany. After qualifying to teach at university level, he was appointed a director of the Max Planck Institute for Neurobiology in Martinsried in July 2001.

The Hansen Family Prize was initiated by Professor Dr. Kurt Hansen, former CEO and later Supervisory Board Chairman of Bayer AG, who died in 2002. The Prize is

backed by a foundation he established in 1998 with starting capital of some EUR 770,000, in “gratitude for a fulfilling career as a scientist and businessman”. The foundation is administered in trust by Bayer.

Information for editors:

A photo is available for download from the "Baynews International" server at <http://www.press.bayer.com>

Leverkusen, January 13, 2005  
ae (2005-0015E)

Your contact:

**Roland Ellmann, Tel.: 0214/30-81690, Fax: 0214/30-58923**  
E-Mail: [roland.ellmann.re@bayer-ag.de](mailto:roland.ellmann.re@bayer-ag.de)

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