

Thomas Hofmann Wins the Prize of the Berlin-Brandenburg Academy of Sciences and Humanities

Dr. Thomas Hofmann, junior research group leader at the German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ), is awarded the €10,000 prize for his outstanding achievements in cancer research. Hofmann, a biologist, unraveled the mechanisms by which cells decide upon their further fate following DNA damage. His findings help to understand how cancer cells respond to therapies involving DNA damage.

Cells constantly have to respond to damage incurred to their genetic material. Metabolic processes, radiation or DNA copying errors cause millions of defects every day. In each individual case, the cell needs to decide how to respond to it. To do so, it has several biological programs to choose from. If the damage is irreparable, it will opt for programmed cell death (apoptosis) or induce cellular senescence, a state in which the cell division cycle cannot advance any further. If the DNA damage is not grave, a variety of mechanisms for its repair will be started.

DNA damage response protects against the formation of tumors, because the organism thus prevents an accumulation of defective cells that may turn cancerous.

In his work, Thomas Hofmann was able to unravel how cell death triggered by DNA damage is induced. He identified a number of molecular switches which regulate this complex biological program. Many chemotherapies as well as radiation therapy of cancer are based on damaging tumor cell DNA. Therefore, such switches also determine how vulnerable a cancer cell is to such treatment methods. Molecular switches are therefore regarded as promising targets for developing drugs to support the effectiveness of cancer therapies.

Thomas Hofmann, born in 1971, studied biology in Heidelberg and earned his PhD from Heidelberg University with the highest grade, "Summa cum laude", in 2000. He subsequently worked as a postdoctoral fellow at the Heinrich Petter Institute of Hamburg University and went on to become a group leader at the German Center for Research on Aging in Heidelberg in 2004. Since 2006, he has led a junior research group at the German Cancer Research Center (DKFZ). Hofmann, jointly with his colleagues, has previously been honored for his research work with the Prize of the Werner Otto Foundation and the Georg-Ernst Konjetzny Award.

The Prize of the Berlin-Brandenburg Academy of Sciences and Humanities donated by the Monika Kutzner Foundation for the Advancement of Cancer Research is awarded annually for outstanding achievements in cancer research. The prize will be presented on this year's Einstein Day on November 30 at Sanssouci Palace in Potsdam.

The German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) with its more than 2,500 employees is the largest biomedical research institute in Germany. At DKFZ, more than 1,000 scientists investigate how cancer develops, identify cancer risk factors and endeavor to find new strategies to prevent people from getting cancer. They develop novel approaches to make tumor diagnosis more precise and treatment of cancer patients more successful. Jointly with Heidelberg University Hospital, DKFZ has established the National Center for Tumor Diseases (NCT) Heidelberg where promising approaches from cancer research are translated into the clinic. The staff of the Cancer Information Service (KID) offers information about the widespread disease of cancer for patients, their families, and the general public. The center is a member of the

Helmholtz Association of National Research Centers. Ninety percent of its funding comes from the German Federal Ministry of Education and Research and the remaining ten percent from the State of Baden-Württemberg.

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