

## **Stem cells and Cancer speak the same language**

**The Meyenburg Award 2008 is presented to the Dutch stem cell researcher Professor Dr. Hans Clevers. The biologist receives the price for the elucidation of a biological pathway that plays a central role in both stem cells and cancer cells. The price which is currently worth 50.000 Euros will be awarded on Thursday, December 11, 2008, during a symposium at the German Cancer Research Center.**

The same biological signals that cause the formation of wings in the dew fly are responsible for tissue maintenance in our organs. This universal communication of cells from all organisms from mollusc to vertebrate, the wnt signal pathway, is the research field of Hans Clevers at Hubrecht Laboratory and Institute in Utrecht, Netherlands. In numerous groundbreaking publications the biologist deciphered the role of wnt-signals for the function of stem cells and in cancerogenesis. For this work he receives the Meyenburg-Award which is currently worth 50.000 €.

Many of Hans Clevers investigations are focused on the cells of the intestinal wall. In order to enhance the uptake of nutrients, the gut surface is enlarged by millions and millions of small cavities and fine excrescences. The short-living specialized cells of the intestinal mucosa have to be permanently renewed by stem cells that are settled in the lower part of the cavities. During maturation and specialization these cells move to the top of the excrescences where they finally are pushed off. Clevers demonstrated that, if the wnt signaling pathway is blocked, the supply of fresh specialized cells ceases and no more cavities in the intestinal wall can be found.

In almost every case of colon carcinoma activating mutations of the wnt signaling pathway are found, mostly within the APC gene. Clevers could show that modifications in this gene result in a permanent onset of the wnt signal, putting cells into a stem cell like state. In this altered state they escape differentiation and rejection and survive too long, thereby accumulating mutations, what finally leads to cancer. Scientists think that wnt signals provoke the malignancy of tumors and therefore are promising targets for new therapies.

On the occasion of the award presentation the Meyenburg Foundation has organized a scientific symposium on the role of wnt signals in stem cells and cancer at the German Cancer Research Center. Dr. Marion Meyenburg, daughter of the founders of the Meyenburg foundation, Wilhelm and Maria Meyenburg, will present the award to Hans Clevers at the end of the symposium. This distinction has been awarded for outstanding achievements in cancer research annually since 1981 and is one of the most well-funded scientific awards in Germany.

**Date:** Thursday, 11. December 2008, 13.00 to 17.45,  
Communication Center, German Cancer Research Center, Heidelberg

**Program:** <http://www.dkfz.de/de/veranstaltungen/veranstaltung.php?id=2863>

The German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) is the largest biomedical research institute in Germany and is a member of the Helmholtz Association of National Research Centers. More than 2,000 staff members, including 850 scientists, are investigating the mechanisms of cancer and are working to identify cancer risk factors. They provide the foundations for developing novel approaches in the prevention, diagnosis, and treatment of cancer. In addition, 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

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