

Media release, December 6, 2012

FMI Director Susan Gasser receives highly esteemed Inserm prize

Susan Gasser, director of the Friedrich Miescher Institute for Biomedical Research of the Novartis Research Foundation, receives today the highly esteemed Inserm Prix International in Paris, for her outstanding scientific contributions to the field of epigenetics. She is honored for her lifetime achievements, which contribute to our understanding of the genetic processes that drive cancer, cell type differentiation and aging. Since 2004, the Inserm Prix International has been awarded by the Institut National de la Santé et de la Recherche Médical in Paris.

Sandra Ziegler Handschin
Communications
Maulbeerstrasse 66
CH-4058 Basel

T +41 61 696 15 39
F +41 61 697 39 76

sandra.ziegler@fmi.ch
www.fmi.ch

Susan Gasser is interested in processes in the cell nucleus that regulate genome function. The structure of the eukaryotic chromosome and its dynamics in the cell nucleus have long occupied her focus. Her demonstration that active and inactive genes are spatially segregated by the proteins that compact the DNA fiber into chromatin, set the stage for studying nuclear organization. By applying quantitative time-lapse microscopy to study the position of specific chromosomal sites, Susan Gasser found that genes move continuously within the cell nucleus, but with different degrees of constraint. This movement allows transitioning from inactive to active compartments and facilitates the reactions needed to maintain the integrity of the genome. Optimization of high-resolution microscopy to visualize and quantify the dynamics and positioning of chromosomal domains, have led to numerous insights into how spatial organization of our genome can impact the function of our genes.

The loss of spatial order can also compromise the integrity of DNA by disrupting the repair of DNA lesions and can impact epigenetic processes that control the selective expression of genes in different tissues. All these in the end influence and often control the fate of the cell, playing a role in the tissue degeneration that accompanies ageing and in the development of cancer.

The Institut National de la Santé et de la Recherche Médical in Paris awards several prizes each year. The Inserm Prix International is the highest honor for an internationally renowned scientific personality and is awarded for their lifetime achievements.

"This prize is great honor for me", comments Gasser, "as it underscores how important it is to understand the basic mechanisms of the cell for biomedical progress. France has been a leading country in recognizing how scientific advances impact human health, extending from the work of Louis Pasteur until today."

Susan Gasser was born in the United States and studied at the University of Chicago, Chicago, Illinois. For her PhD thesis she came to the Biozentrum of the University of Basel and stayed in Switzerland to pursue her successful scientific career. She was a Group Leader at the Cancer Institute ISREC in Epalinges and held a professorship at the University of Geneva. Since 2004, she is director of the Friedrich Miescher Institute for Biomedical Research in Basel, which is part of the Novartis Research Foundation. She still has her own research group at the FMI, which works to further deepen the understanding of the processes in the cell nucleus. She holds a Professorship in Molecular Biology at the University of Basel, of which the FMI is an affiliated institute.

Contact

Sandra Ziegler, 061 696 15 39, sandra.ziegler@fmi.ch
Susan M. Gasser, 061 697 50 25, susan.gasser@fmi.ch



Friedrich Miescher Institute
for Biomedical Research

Images

Available for download at: www.fmi.ch

Photos may be used free of charge only in connection with reporting on this media release. Not to be archived. © Inserm.

About the FMI

The Friedrich Miescher Institute for Biomedical Research (FMI), based in Basel, Switzerland, is a world-class center for basic research in life sciences. It was founded in 1970 as a joint effort of two Basel-based pharmaceutical companies and is now part of the **Novartis Research Foundation**. The FMI is devoted to the pursuit of fundamental biomedical research. Areas of expertise are neurobiology, growth control, which includes signaling pathways, and the epigenetics of stem cell development and cell differentiation. The institute counts 320 collaborators. The FMI also offers training in biomedical research to PhD students and postdoctoral fellows from around the world. In addition the FMI is affiliated with the University of Basel. The Director of the FMI since 2004 is Prof. Susan Gasser.