

## The nitty-gritty of RNAi

### **Target audience / prerequisites:**

PhD students and PostDocs who plan to do RNAi experiments. A general basic understanding of the principle of RNAi is a prerequisite.

### **Learning objectives:**

To learn about different possibilities how to do an RNAi experiment, the advantages and disadvantages of the different options.

To be able to do an RNAi experiment successfully.

To be able to trouble shoot RNAi experiments.

### **Description**

The training course will give an introduction into RNAi technology in mammalian cells including ways to maximise silencing efficiency while minimizing specificity risks (off-target effects), delivery methods and the expression of siRNA/shRNA molecules from viral vectors.

Steps in the design of a robust and efficient assay, its development and validation including controls will be presented. An automated high-content analysis will be demonstrated in small groups. Aspects of image analysis, data management and data mining can be included if it is of interest for participants.

In the practical part 3 groups of 2-3 persons will get an introduction and first hands-on experience to RNAi in human cells including automated analysis. Methods which will be applied are lipid-based siRNA transfection, generation of lentiviruses by transfection of 293T cells, lentiviral transduction of cells, RNA isolation, real time RT-PCR, immunofluorescence staining.

### **Method :**

Classroom teaching and hands-on

### **Maximal number of participants:**

10

### **Date:**

17-20 March 2008

### **Venue:**

Max Planck Institute for Infection Biology, Berlin, Germany

### **Registration:**

Researchers interested to participate need to send a short description (appr. half page) of their planned RNAi work to: [right@mpiib-berlin.mpg.de](mailto:right@mpiib-berlin.mpg.de)

Participants will be chosen after an internal reviewing process based on their planned scientific work.

**Deadline for applications is 17 February 2008.**