



# microRNA Analysis Using Next-Generation Sequencing

From microRNA profiling and prediction to extensive downstream analyses

**DATE** September 21–23, 2016

**TIME** 9 am – 5 pm

**VENUE** Berlin, Germany

Understand small RNA sequencing analysis issues and solve them yourself.

The target audience is biologists or data analysts with no or little experience in analyzing small RNA-Seq data.

### Included in the Course

- ✓ Course materials
- ✓ Catering during the workshop
- ✓ Conference dinner
- ✓ High-performance workstations (no laptop needed)

### In a Nutshell

- Learn the basics of different small non-coding RNAs and their characteristics
- Understand the method of small RNA sequencing
- Find differentially expressed small RNAs
- Perform microRNA gene prediction
- Analyze your small RNAs (microRNA target prediction, functional analysis, etc.)
- Execute popular open-source microRNA tools (miRanalyzer, miRDeep, etc.) on a Windows machine (using a Linux VM)

### Scope and Topics

The purpose of this workshop is to obtain a thorough understanding on the expression profiling of known microRNAs and the prediction of novel microRNA genes using next-generation sequencing technologies (NGS). The participants will be trained to understand both, the data analysis aspects of NGS technologies and the functional implications of small RNAs. Downstream analysis to infer the functional implication of the detected microRNAs will be discussed including target prediction/detection and functional analysis. After this workshop, the participants will be able to perform their own microRNA analysis using up-to-date methods and extract scientific valuable findings.



### Trainers

Prof. Dr. Michael Hackenberg  
University Granada



Dr. David Langenberger  
ecSeq Bioinformatics



### Keynote-Speakers

Prof. Dr. Peter F. Stadler  
University of Leipzig



Dr. Jana Hertel  
Helmholtz-Centre (UFZ)

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### Registration Fee

998 EUR (excluding VAT)

Travel expenses and accommodation are not covered by the registration fee.