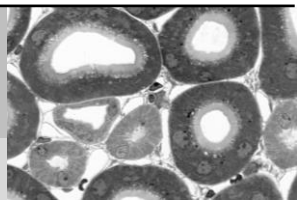

REN[PRO] Method Course:

Dr. Fulvia Ferrazzi (UKER, FAU): Fundamentals of bioinformatics analysis of RNA-seq and ATAC-seq data

Date: June 20 – 21, 2024

Place: Universitätsklinikum Erlangen
Internistisches Zentrum - Medizinische Klinik 4
Bibliothek Room number C 2 565

Target group: PhD students of the TRR 374,
open for medical doctoral students, PostDocs and Clinician Scientists in the TRR 374, and for interested doctoral students (via the graduate schools)

Credit Points: Full participation can be counted as a method course with 0.6 CPs within the Curriculum of the Graduate Schools (RIGel, BioMediGS, life@FAU)

Registration and contact: michaela.kritzenberger@ur.de
Registration of TRR members requested by April 15, 2024
Registration for those interested via the graduate schools: April 16- 22, 2024
Maximum number of participants: 12 (first come first serve)

Contents & Schedule:
Omics data analyses have gained a key role in biomedical research as well as precision medicine. The course will cover the fundamental principles and methodologies for the bioinformatics analysis of RNA-seq and ATAC-seq, two widely used next-generation-sequencing analysis techniques. Key analyses steps will be discussed, from basic preprocessing and quality control, to differential expression, pathway-based analysis, peak annotation, transcription factor motif analysis, and data visualization. During practical sessions, participants will gain hands-on experience without requiring prior programming knowledge. Participants are asked to bring their laptops.

Thursday, June 20 2024	
10:00h - 10:30h	**Welcome**
10:30h - 12:00h	**RNA-seq data analysis with practicals - Session I**
12:00h - 13:30h	**Lunch Break & Discussion**
13:30h - 15:00h	**RNA-seq data analysis with practicals - Session II**
15:00h - 15:30h	**Coffee Break & Discussion**
15:30h - 17:00h	**RNA-seq data analysis with practicals - Session III**
19:00h	**Joint Dinner**

Friday, June 21 2024	
08:30h - 10:00h	**ATAC-seq data analysis with practicals – Session I**
10:00h - 10:30h	**Coffee Break & Discussion**
10:30h - 12:00h	**ATAC-seq data analysis with practicals– Session II**
12:00h - 13:30h	**Lunch Break & Discussion**
13:30h - 15:30h	**ATAC-seq data analysis with practicals – Session III**