Course advertisement

Molecular Biology Methods

This course is intended to provide a general overview, as well as deep insights into different molecular biology methods for gene and protein expression profiling, analysis of promoter regulation and gene silencing (including real-time quantitative PCR, Chromatin immunoprecipitation, Western blot, High throughput screening, etc.). The course is intended to be of direct practical application and will cover experimental design, different methodology approaches, method limitations, troubleshooting, protocols reagents and kits, and presentation of results. Real life case scenarios and practical issues will be also discussed.

The course is open to all PhD students.

Date / time: Monday/Tuesday, September 17/18, 2018 (2 full days)
Room: University of Zurich, Irchel Campus, Y10 G03/04
Type: Lecture
Preparation: Students are requested to bring real case scenarios or issues from their own research for discussion.
Lecturer: Dr. Pedro A. Ruiz-Castro (PedroAntonio.Ruiz-Castro@usz.ch)
Maximum participants: 30
Recommendation: To be taken during the first year of the PhD
Further information: imMed Coordination Office: Heidi Preisig (preisig@zihp.uzh.ch)
Credit points: 1 ECTS credit
Registration: By email to Heidi Preisig (preisig@zihp.uzh.ch)
Deadline for registration: August 31, 2018
Course program

Molecular Biology Methods

Monday, September 17, 2018 – Conventional and real-time quantitative PCR, Chromatin immunoprecipitation and Gene Silencing

Seminar room Y10 G03/04

09:00 – 09:15 h  Introduction to the course
09:15 – 09:45 h  Central dogma of molecular biology
09:45 – 10:00 h  Break
10:00 – 10:45 h  Real-time quantitative PCR – part I
10:45 – 11:00 h  Break
11:00 – 11:45 h  Real-time quantitative PCR – part II
11:45 – 13:00 h  Lunch
13:00 – 13:45 h  Real-time quantitative PCR – part III & Chromatin immunoprecipitation
13:45 – 14:00 h  Break
14:00 – 14:45 h  Transfection and gene silencing
14:45 – 15:00 h  Break
15:00 – 16:30 h  Case scenarios
Tuesday, September 18, 2018 – Functional Genomics, Western blotting and Immunoprecipitation

Functional Genomics Center at Irchel Campus Y32H52

09:00 – 11:45 h Guided visit to the Functional Genomics Center

11:45 – 13:00 h Lunch

Seminar room Y10 G03/04

13:00 – 13:45 h Western blot analysis – part I

13:45 – 14:00 h Break

14:00 – 14:45 h Western blot analysis – part II & Immunoprecipitation

14:45 – 15:00 h Break

15:00 – 16:30 h Case scenarios

Contact person: PD Dr. Pedro A. Ruiz-Castro (PedroAntonio.Ruiz-Castro@usz.ch)