Cycle H: Molecular Medicine

Coordinator: Radek Skoda

H1: Molecular Medicine I – 22831
(2 hrs/week; 2 CP)

H2: Molecular Medicine II – 12424
(2 hrs/week; 2 CP)

Ch. Handschin, M. Heim, R. Skoda

The purpose of this lecture series is to introduce biologists to the mechanisms that cause human diseases. Emphasis will be on the genetic and environmental factors that lead to diseases, and how this knowledge can be used to develop diagnostic and therapeutic procedures. The series will start with a lecture on the human genome and its impact on molecular medicine, followed by lectures on infectious diseases (e.g. AIDS, Malaria), and disorders of the immune system (e.g. rheumatoid arthritis). Other lectures will concentrate on organ systems such as blood, cardiovascular system, gastro-intestinal and respiratory system and more general topics such as cancer, psychiatric disease and aging.

H3: Vertebrate Development, Stem and Genetics - 14459
(2 hrs/week; 2 CP)

J. Lopez-Rios, V. Taylor, R. Zeller, A. Zuniga

This course will introduce the molecular mechanisms controlling vertebrate development and discuss the most relevant vertebrate genetic models and tools to analyze developmental processes. It will also highlight the relevance of understanding developmental mechanisms with respect to development of the immune system, stem cell biology and congenital malformations affecting humans.

H5: Translational Cancer Research – 12420
(2 hrs/week; 2 CP)


The aim of the course is to give students in the life science area broad knowledge in the cancer research. The lecturers discuss all aspects of cancer research, ranging from molecular results gleaned from basic research, encompassing the pathology of cancer and finally discussing new and ‘old’ cancer therapeutics. The lecturers range from those conducting basic research in the cancer area, to scientists developing novel anti-cancer therapeutics in the pharmaceutical industry, to clinicians who work daily with cancer patients. The course is carried out in two cycles, each in the spring semester, and is aimed at advanced students in the life sciences.

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