



**Dottorato in Genetica, Biologia Molecolare e Cellulare**  
Scuola di Dottorato in Scienze della Vita "Camillo Golgi" - Università degli Studi di Pavia

**March 4th-8th, 2019**

(Aula Buzzati-Traverso, Building of Genetics and Microbiology)

### **Frontiers in cellular biology**

#### **"From the origin of the cell to its fate under the microenvironment influence"**

**Organizers:** Professors Maria Grazia Bottone, Sergio Comincini, Andrea Frontini, Valeria Merico, Rosanna Nano

Department of Biology and Biotechnology "L. Spallanzani", University of Pavia

Department of Public Health, Experimental and Forensic Medicine, University of Pavia

The development of different cell types and their functions are influenced not only by internal cellular machinery but also by external mechanical and biochemical cues from the surrounding microenvironment. Slight changes to the microenvironment can result in dramatic changes to the cellular phenotype.

Aim of this course will be to discuss the microenvironment influence on cell fate in terms of function acquisition, differentiation and cell survival or death.

The development of a competent gamete, the hematopoietic, adipocyte and skeletal muscle differentiation processes in physiological or altered conditions, the microbiota influence of brain development, ageing and neurodegeneration and the activation of phagocytosis will be the topics tackled during the course.

#### **Preliminary Programme:**

##### **March 4th**

###### **14.00-16.00**

Prof.ssa Federica Franciosi (Reproductive and Developmental Biology Laboratory  
Department of Health, Animal Science and Food Safety University of Milan)

*The ovarian and follicular niche: how the microenvironment shapes the next generation*

###### **16.00-18.00**

Prof.ssa Paola Grimaldi (Department of Biomedicine and Prevention, University of Rome Tor Vergata)

*Male germ cell differentiation: role of the endocannabinoid system*

## **March 5th**

### **14.00-16.00**

Prof. Daniela Montagna (Pediatrics, Laboratory of Immunology, Fondazione IRCCS Policlinico San Matteo)

*New frontiers of anti-tumor adoptive immunotherapy*

### **16.00-18.00**

Prof. Paolo Bernasconi (Pediatrics, Laboratory of Immunology, Fondazione IRCCS Policlinico San Matteo)

*The leukemic cell and its niche: a new potential therapeutic target?*

## **March 6th**

### **14.00-16.00**

Prof. Andrea Frontini (Department of Public Health, Experimental and Forensic Medicine, University of Pavia)

*Adipocytes differentiation: influence of the environment and microenvironment in pathophysiological conditions such as cold exposure and obesity*

### **16.00-18.00**

Dr. Annapia Verri (IRCCS Istituto Neurologico Mondino, Pavia)

*Obesity in adult people with intellectual disability of different etiology and severity*

## **March 7th**

### **14.00-16.00**

Dr. Flavio L. Ronzoni (Experimental Cardiomyology Laboratory, Institute of Human Anatomy, University of Pavia)

*Skeletal muscle stem cells: new insights in Regenerative Medicine*

### **16.00-18.00**

Prof. Paola Rossi (Department of Biology and Biotechnology "L. Spallanzani", University of Pavia)

*The microbiota influence of brain development, ageing and neurodegeneration*

## **March 8th**

### **14.00-16.00**

Prof. Sergio Comincini (Department of Biology and Biotechnology "L. Spallanzani", University of Pavia)

*Exosome vesicles at their cellular stargates*

### **16.00-18.00**

Dr. Federico Manai (Department of Biology and Biotechnology "L. Spallanzani", University of Pavia)

*To eat or not to eat: this is the autophagic problem*