



### **Title of the course**

Persistent Viral Infections and Immune Evasion

### **Directors**

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### **Summary of the course**

This course is located at the intersection between virology and immunology. The aim of the course is to educate graduates and post-graduates with understanding and expertise in virology, with a particular focus on persistent viruses and the mechanisms by which viruses escape from the immune system. This specific theoretical knowledge will provide students with the critical judgement and skills to pursue a career in virology and/or immunology.

The program has a significant theoretical teaching component to ensure that the students gain maximal exposure to a wide range of clinically relevant viruses associated with persistence. The frame-work of the course (6 days) will not allow the opportunity to organize practical work. However, to ensure interactivity, students in small groups will prepare a bibliographical



analysis under the guidance of a tutor and will present their work to the whole class. It will be a great opportunity to allow students to discuss with experts, ask questions, and participate in a global exchange, paving the way for future collaborations.

This course will cover infections in which the virus is not cleared, but remains in specific cells of infected individuals. Persistent infections may involve successive stages of silent and productive infection without rapidly killing or even producing excessive damage to the host cells.

This topic is of significant importance for public health, as currently the measures that have successfully eradicated persistent viruses are slim to none. Vaccination, interferons, and antiviral drugs can reduce the frequency of clinical recurrence and limit clinical symptoms, but viruses remain associated with specific host tissues.

Through state of the art lectures, the course will highlight the different mechanisms of persistence selected by the various viruses. Students will be prompted to examine various situations and discuss fundamental questions. The focus of this course will be to strengthen the knowledge and competence of students in this field.

### **Practical information**

#### **Location**

Institut Pasteur of Rome  
Viale Regina Elena 291, 00161 Roma, Italia

Sapienza University  
Piazzale Aldo Moro, 5, 00185 Roma, Italie

#### **Dates of the course**

09 July to 14 July 2018

#### **Language**

English

#### **Aim and objectives**

The course will focus specifically on remarkable examples of viral persistence e.g. Retroviruses (HTLV-1), Herpes viruses (Epstein-Barr virus, Cytomegalovirus, Herpes Simplex), Hepatitis virus (HBV and HCV) and papillomaviruses. The association of these different forms of persistence with specific pathologies and diseases of different severity will also be discussed.

Persistent viruses belong to a number of viral families, including the RNA viruses (*Retroviridae*) and DNA viruses (*Hepadnaviridae*, *Herpesviridae*, *Papillomaviridae*). The program of this 6 days course will be focused on different viruses associated with persistent pathologies. The course will be only theoretical.



Ability to evade the host immune system is a major roadblock in achieving complete protection against persistent viral infections and malignant diseases. DNA viruses such as Herpesviruses encode several genes that directly evade the host innate and adaptive immune responses. Because of potent immune evasion mechanisms, and the ability of the virus to persist in immune competent hosts, a vast majority of the global population remain infected with at least one of the herpes virus. Herpes Simplex virus (HSV) type 1 and 2, Human Cytomegalovirus (HCMV), and Epstein-Barr virus (EBV) are a few examples of Herpesviruses. Human papillomavirus (HPV) is a causative agent for cervical cancer, and establishes persistent infection. RNA viruses like human immunodeficiency virus (HIV) undergo extensive antigenic variations due to the selective pressure of the immune system, which leads to immune evasion.

### **Lecturers**

Vincenzo Barnaba	Institut Pasteur, Rome
Alberto Faggioni	Institut Pasteur, Rome
Dominique Franco	Institut Pasteur, Paris
John Hiscott	Institut Pasteur, Rome
Stipan Jonjic	Rijeka Univ. Croatia
Pierre Langlade-Demoyen	Invectys, Institut Pasteur,
Angela Santoni	Institut Pasteur, Rome
Maria Torrisi	Institut Pasteur, Rome
Jean-Pierre Vartanian	Institut Pasteur, Paris
Aldo Venuti	Institut Pasteur, Rome

### **Attendees**

30

### **Duration**

6 days

### **Contact us**

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**Application deadline**

30 May 2018

**On line registration**

**Documents available to download**

WEB diffusion template, poster, program, application form

**The call is open to scientific and medical students, Master, PhD, MD and Postdoctoral researchers.**

**The course will finance accommodation with breakfast, lunches and coffee breaks.  
The flight ticket and dinners will be at your own expense.**

**The committee of the course will evaluate applications**