Computational Immunology Workshop

On the 16th of November, with the support of the *Pole Rabelais*, the *SIRIC Montpellier Cancer*, and the *IRCM*, we organize a **1-day workshop** on the theme ***Computational Immunology***. The meeting **will take place at IRCM auditorium**. We will discuss computational or bioinformatics aspects of immunology and the cancer microenvironment.

Recent developments in DNA sequencing and functional proteomics have made possible remarkably successful data driven research in these fields. It requires bioinformatics and computational abilities to transform data into information. The workshop is a unique opportunity to learn from experts who applied such techniques to conduct meaningful biological and translational research.

We will welcome **prestigious international and French speakers**:

- Dr Andreas Pichlmair, Max Plank Institute, Munich, innate immunity ;
- Dr Fatima Mechta-Grigoriou, Institut Curie, Paris, tumor microenvironment ;
- Pr Zlatko Trajanoski, Biocenter, Innsbruck, oncoimmunology ;
- Dr Monsef Benkirane, IGH, Montpellier, immunology ;
- Pr Marie-Paule Lefranc, IGH, Montpellier, immunoinformatics.

Registration is free but mandatory: Inscription

In addition, **YOU are invited to submit an abstract** for an oral or poster presentation (send to jacques.colinge@inserm.fr) and **contribute** to the success of this workshop.

The organizers: Ula Hibner (IGMM), Sofia Kossida (IGH), Jacques Colinge (IRCM).

Institut de Recherche en Cancérologie I R C Montpellier

SIRIC MONTPELLIER CANCER Site de Recherche Intégrée sur le Cancer

Pôle BioSanté RABELAIS

COMUE Languedoc Roussillon Universités

Preliminary Program

08:45 *Registration*

09:00 Opening and introductory remarks

Session 1 Innate and adaptive immunity

09:00 **Keynote 1: Andreas Pichlmair,**
Max-Planck Institute of Biochemistry, Munich, *New sensors of the viral nucleic, a multispecies proteomics and systems biology approach*

09:45 **Keynote 2: Marie-Paule Lefranc**,
IGH, Montpellier, *NGS répertoires, IMGT et immunoinformatique*

10:30 Coffee break

10:50 **Keynote 3: Monsef Benkirane,**
IGH, Montpellier, *Topics to be defined but including single-cell mRNA-seq*

11:35 Selected presentation: Maria Kondratova,
Curie, Paris, *Molecular networks for analysis of innate immune cells heterogeneity and polarization in tumor microenvironment from single-cell data*

12:05 Selected presentation: Samuel Alizon
CNRS, Montpellier, *Inferring virus and immune kinetics in acute HPV infections using ecological models*

12:35 *Lunch break*

Session 2 Cancer and immunology

14:00 **Keynote 4: Fatima Mechta-Grigoriou,**
Curie, Paris, *Tumor microenvironment and cancer-associated fibroblasts, a multidisciplinary approach*

14:45 **Keynote 5: Zlatko Trajanoski,**
Faculté de médecine, Innsbruck
Inférence bioinformatique de l'infiltrat immunitaire du microenvironnement tumoral

15:30 **Selected presentation: Florent Petitprez,**
Centre de Recherche des Cordeliers, Paris,
Quantification of tumor microenvironment's immune and stromal populations from transcriptomic data: the MCP-counter method and its application to human cancers and preclinical mouse models

16:00 **Open slot for additional selected presentations**

17:00 *Closing*