

Return of the Musketeers and Samurai The 3rd France-Japan symposium on HIV/AIDS and infectious disease basic research

ANRS-MIE AC41 and Institut Pasteur

October 28th, 29^h and 30th 2024

Institut Pasteur, 205 Rue de Vaugirard - 75015 Paris

PROGRAM

**Day 1: October 28th 2024
Institut Pasteur - Amphitheater Duclaux**

From 8h30 **WELCOME**

INTRODUCTION

9h00-9h10

Victor Appay (*INSERM, University of Bordeaux*) and **Ai Kawana-Tachikawa** (*Institute of Medical Science, University of Tokyo*)

The jedi council: Words from the wise ones

9h10-9h30 (5 min each)

Chairs: Michaela Muller-Trutwin (*Institut Pasteur, Paris*), **Tetsuro Matano** (*National Institute of Infectious Diseases, Tokyo*)

TBD...

Session 1 – The way of the virus: Viral evolution and epidemiological modeling

9h30-11h00 (15min Presentation + 2-3min Q/A)

Chairs: Etienne Simon-Loriere (*Institut Pasteur, Paris*), **Akatsuki Saito** (*Department of Veterinary Medicine, University of Miyazaki*)

- **Simon Cauchemez** (*Institut Pasteur, Paris*):
Using mathematical models to analyze complex epidemic data and gain key insights on epidemic dynamics and control
- **Kei Sato** (*The Institute of Medical Science, University of Tokyo*):
Evolution of SARS-CoV-2
- **Karim Majzoub** (*IGMM-CNRS, University of Montpellier*):

Deltavirus Infection in human and animal hosts

- **So Nakagawa** (*Tokai University School of Medicine, Kanagawa*):
Comprehensive RNA virus detection from metatranscriptome data using NeoRdRp
- **Akatsuki Saito** (*Department of Veterinary Medicine, University of Miyazaki*):
Species tropism of Orthohepadnavirus

11h00-11h30

COFFEE BREAK

Session 2 – The death star: Virus entry and restriction factors

11h30-13h00 (15min Presentation + 2-3min Q/A)

Chairs: **Hélène Dutartre** (*CIRI, ENS, Lyon*), **Kenzo Tokunaga** (*National Institute of Infectious Diseases, Tokyo*)

- **Koichi Watashi** (*National Institute of Infectious Diseases, Tokyo*):
Mode of hepatitis B virus preS1 interaction with its host entry receptor
- **Olivier Schwartz** (*Institut Pasteur, Paris*):
“Entry and replication of human seasonal coronavirus HKU1”
- **Saori Suzuki** (*Graduate School of Medicine, Hokkaido University*):
NEDD4-binding protein 1 suppresses HBV replication by degrading HBV mRNAs
- **Delphine Muriaux** (*IRIM, CNRS Montpellier*):
Characterization of HIV-1/HTLV-1 assembly in biofilm-like structures using advanced super-resolution microscopy techniques
- **Terumasa Ikeda** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*):
Interaction between APOBEC3 family proteins and HIV-1 in myeloid cell line THP-1

13h00-14h30

LUNCH

Session 3 – The immunity strikes back: Anti-viral immune responses - Episode I

14h30-16h00 (15min Presentation + 2-3min Q/A)

Chairs: **Nabila Seddiki** (*IDMIT-CEA, Université Paris-Saclay*), **Masafumi Takiguchi** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*)

- **Takayuki Chikata** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*):
Co-adaptation of HLA-C14-restricted immune pressure and escape mutations
- **Pierre Tonnerre** (*Saint-Louis Research Institute, Paris*):
Immune landscape in functional cure of chronic HBV
- **Masanori Isogawa** (*National Institute of Infectious Diseases, Tokyo*):
Overcoming hepatitis B virus-specific CD8+ T cell tolerance
- **Takushi Nomura** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*):
T-cell-mediated suppression of pneumonia in SARS-CoV-2 infection

16h00-16h30

COFFEE BREAK

Session 4 – The dark side: Virus integration and tumorigenesis

16h30-18h30 (15min Presentation + 2-3min Q/A)

Chairs: **David Durantel** (*CIRI, Lyon*), **Yorifumi Satou** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*)

- **Moncef Benkirane** (*CNRS, University of Montpellier*):
Understanding the biology of unintegrated HIV-1 DNA: impact on viral replication and persistence
- **Takeshi Noda** (*Institute for Life and Medical Sciences, Kyoto University*):
Studies on virus replication mechanisms using new technologies such as cryoelectron microscopy and respiratory organoids
- **Jocelyn Turpin** (*IVPC, INRAE Lyon*):
Pathophysiology and rare tumors. Molecular biology single cells, integration site

- **Shinichi Machida** (*National Center for Global Health and Medicine, Tokyo*):
Biology of the HIV-1 Viral DNA: From DNA Synthesis to Integration into the Host Genome
- **Joachim Lupberger** (*INSERM, Université Strasbourg*):
Epigenetic viral imprinting and cancer risk during chronic viral hepatitis
- **Franck Mortreux** (*LBMC, ENS de Lyon*):
- Biology of viral RNAs and tumorigenesis. Alternative splicing, chromatin reorganization. Deep sequencing

18h30

“CHEESE AND WINE” social gathering

End of the day

Day 2: October 29th 2024

Institut Pasteur - Amphiteater Duclaux

From 8h30

WELCOME

Session 5 – The virus-cell wars: Viral pathogenesis and innate immunity

9h00-11h00 (15min Presentation + 2-3min Q/A)

Chairs: **Philippe Benaroch** (*Institut Curie, Paris*) **Toru Okamoto** (*Juntendo University School of Medicine, Tokyo*)

- **Sébastien Nisole** (*IRIM, CNRS, University of Montpellier*):
Control of mosquito-borne flaviviruses by interferon-stimulated genes
- **Toru Okamoto** (*Juntendo University School of Medicine, Tokyo*):
TLR2 ligand in mosquito's saliva enhances pathogenicity of flaviviruses
- **Marie-Line Andreola** (*CNRS, University of Bordeaux*):
Regulation of the replication of human pathogenic RNA viruses
- **Naofumi Takahashi** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*):
Monocyte and macrophage subsets in persistent HIV-1 infection
- **Chloé Journo** (*CIRI, ENS de Lyon*):
Comparative virology. Multiomics approaches to the different functions of TAX variants
- **Yonatan Ganor** (*Institut Cochin, Paris*):
Mucosal viruses: from pathophysiology of transmission to neuro-immune prevention

11h00-11h30

COFFEE BREAK

Session 6 – The immunity strikes back: Anti-viral immune responses - Episode II

11h30-13h00 (15min Presentation + 2-3min Q/A)

Chairs: **Michaela Muller-Trutwin** (*Institut Pasteur, Paris*), **Ai Kawana-Tachikawa** (*Institute of Medical Science, University of Tokyo*)

- **Mariangela Cavarelli** (*CEA, Paris*):
Exploring HIV Pathogenesis and Prevention Strategies: Insights from Non-Human Primate Models
- **Kenji Sugata** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*):
Integrated single cell analysis of HTLV-1 specific CD8 T cells in peripheral blood and cerebrospinal fluid from HAM/TSP patients
- **Hugo Mouquet** (*Institut Pasteur, Paris*):
Human Broadly Neutralizing Antiviral Antibodies
- **Hiroyuki Yamamoto** (*National Institute of Infectious Diseases, Tokyo*):
Immunosignaling-based shaping of antibody responses in SIV infection
- **Shiki Takamura** (*RIKEN Center for Integrative Medical Science, Kanagawa*):
Overcoming the short-lived nature of tissue-resident memory CD8⁺ T cells in the lung

13h00-14h30

LUNCH

Session 7 – The rise of the padawans: Young investigator session

14h30-16h15 (8min Presentation + 2min Q/A)

Chairs: **Anastassia Komarova** (*Institut Pasteur, Paris*), **Takamasa Ueno** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*)

- **Lisa Bertrand** (*Center for Integrative Genomics, University of Lausanne*):
Unveiling novel conserved HIV-1 open reading frames encoding T cell antigens using ribosome profiling

- **Keiko Yasuda** (*University Graduate School of Medical Sciences, Nagoya*): MEX3B, an RNA-binding protein, strongly suppresses HIV-1 viral replication depending on its RNA-binding ability
- **Luis Romero Martin** (*Institut Pasteur, Paris*): Unraveling the relationship between NK cell polyfunctional capacity and HIV/SIV post-treatment control
- **Omnia Reda** (*Joint Research Center for Human Retrovirus Infection, Kumamoto University*): HIV-Tocky system to visualize proviral expression dynamics
- **Florian Dubois** (*Institut Pasteur, Paris*): Biological effect of cytokine specific auto-antibodies on immune responses in a healthy population
- **Kaho Shionoya** (*National Institute of Infectious Diseases, Tokyo University of Science*): Mechanism of hepatitis B virus restriction by macaque-derived receptor homologue
- **Pierre-Grégoire Coulon** (*Institut Cochin, Paris*): GAS7 F-BAR Protein Regulates Macrophage Constitutive Antiviral Defense Through Macropinocytosis
- **Mitsukaze Watanabe** (*National Institute of Infectious Diseases, Tokyo*): Antibody response against dengue virus infection
- **Morgane Picard** (*INSERM, Paris University*): T follicular helper cells in SIV-infected rhesus macaques
- **Takuto Nogimori** (*National Institutes of Biomedical Innovation, Health and Nutrition, Osaka*): Comparative efficacy of mRNA and self-amplifying RNA vaccine platforms in immune response induction

16h15-16h45

COFFEE BREAK

Session 8 – New hopes: Vaccines and therapies

16h45-18h15 (15min Presentation + 2-3min Q/A)

Chairs: Anne Sophie Beignon (*CNRS, CEA, Paris*) Tetsuro Matano (*National Institute of Infectious Diseases, Tokyo*)

- **Anavaj Sakuntabhai** (*Institut Pasteur, Paris*): Dengue vaccine development
- **Claire Monge** (*IVPC, INRAE, Lyon*): Mucosal vaccination: delivery systems and mucosal immunity
- **Aki Tanabe** (*National Institute of Infectious Diseases, Tokyo*): Development of antibody-based therapeutics targeting to Adult T-cell leukemia/Lymphoma
- **Laura Papagno** (*CNRS, INSERM, Université de Bordeaux*): Distinct adjuvanticity for *de novo* or recall CD8+ T cell responses
- **Takuya Yamamoto** (*National Institutes of Biomedical Innovation, Health and Nutrition, Osaka*): The challenge establishing an HIV cure strategy by using the NHP model

Closing remarks & final options for one to one meetings

End of the day at 18h30

Evening

Speakers' & chairs' dinner

Day 3: October 30th 2024
Institut Pasteur - Modules de réunion

9h00

WELCOME

SPEED DATING: One to one meetings (in 5 x 20 parallel sessions) in meeting rooms

9h00-9h30

9h30-10h00

10h00-10h30

10h30-11h00

11h00-11h30

11h30-12h00

COFFEE provided during one to one meetings

14h30-16.00 Lab visits of post-doc candidates

Scientific and Organizing Committee

France : Victor Appay^{1,2}, Anne-Sophie Beignon^{3,4}, David Durantel^{1,5}, H  l  ne Dutartre^{1,5}, Jerome Estaquier^{1,6}, Michaela M  ller-Trutwin^{6,7}, Asier Saez-Cirion^{6,7} Anavaj Sakuntabhai^{7,8}, Nabila Seddiki⁴.

¹ INSERM, ² Universit   de Bordeaux, ³ CNRS, ⁴ CEA, ⁵ Universit   de Lyon, ⁶ Universit   Paris Cit  , ⁷ Institut Pasteur, ⁸ Institut Pasteur Japan Office

Japan : Tetsuro Matano¹, Masafumi Takiguchi², Ai Kawana-Tachikawa¹, Koichi Watashi¹, Hiroyuki Yamamoto¹, Takuya Yamamoto³, Akatsuki Saito⁴

¹ NIID - Tokyo University, ² Kumamoto University, ³ NIBIOHN - Osaka University, ⁴ Miyazaki University

ANRS Emerging infectious diseases (ANRS MIE) : Nathalie Alazard, Guia Carrara, Dahlia Chebbah, C  cile Peltekian, Yazdan Yazdanpanah,