

Annual meeting of the Coordinated Action « Modelling infectious diseases »

12-14 November 2025

Institut Pasteur – Duclaux lecture hall

Wednesday 12 NOV – ‘Early Career Researcher Day’
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13:00: Gates opening - Welcome coffee and tea
Hall principal de l’amphithéâtre Duclaux

14:00-15:00 Round table about French research centres’ and universities’ permanent recruitment

Speakers:

- Quentin Leclerc (Tenured Assistant Professor, CNAM and Mesurs, <https://gleclerc.github.io/index.html>)
- Quentin Clairon (Permanent researcher, Inria, Bordeaux Population Health Research Center, <https://scholar.google.com/citations?user=io8ZaeIAAAAJ>)
- David Smith (Permanent researcher, INSERM and Institut Pasteur)
- Hélène Cecilia (Permanent researcher, INRAE, UMR 1300 BIOEPAR <https://bioepar.angers-nantes.hub.inrae.fr/l-unite/annuaire2/membres-c/cecilia-helene2>)
- Pierre-Yves Boëlle (University Professor - Hospital Practitioner, Team leader "Surveillance and Modelling of Communicable Diseases" at iPLesp, Director of ED393)

15:00-15:15 Coffee break
Hall principal de l’amphithéâtre Duclaux

15:15-16:15 Seminar "Uses and misuses of AI in Scientific Writing",
Speaker: David Del Álamo (Fellowsherpa)

David del Álamo received his Ph.D. in developmental biology at the Severo Ochoa Center for Molecular Biology in Madrid and postdoctoral training at the Mount Sinai Hospital in New York and the Pasteur Institute in Paris. David was scientific editor for The EMBO Journal and EMBO reports, managing editor of Review Commons, and the head of the EMBO Fellowship Programme. David obtained a Master of Business Administration (MBA) degree in 2017. He collaborates as an editorial consultant for The Journal of Cell Biology and Life Science Alliance.

16:30-17:30 Speed networking and community building activities

19:00

Social dinner

Location: Restaurant L'Authentique 167 rue de Vaugirard, 75015 Paris

Thursday 13 NOV

9:30-10:00

Presentation of the activities of the Coordinated Action

SESSION 1 (*Chairs: Camille Pelat & Thomas Bénéteau*)

10:00-10:35

David Smith

INSERM and Institut Pasteur

Modelling to inform investment cases for vaccines targeting emerging infectious diseases

10:35-11:00

Bastien Reyné

CNRS

Leaky or polarised immunity: Non-Markovian modelling highlights the impact of immune memory assumptions

11:00-11:25

Aurélie Maurin

INSERM, Institut Pasteur, and CNAM

Evaluation of pneumococcal vaccination policies using mathematical modelling of serotype-specific carriage dynamics

11:25-11:55

COFFEE BREAK

SESSION 2 (*Chairs: Amandine Véber & Lucille Calmon*)

11:55-12:20

Francesco Parino

INSERM and Sorbonne Université

Defining regimes to control and contain the spatial dissemination of emerging infectious diseases

12:20-12:45

Aurélien Velleret

Université d'Evry-Val d'Essonne

Inter-city infections and the role of size heterogeneity in containment strategies

12:45-14:15

LUNCH BREAK

SESSION 3 (*Chairs: Raphaëlle Metras & Constanze Ciavarella*)

14:15-14:40

Lina Cristancho-Fajardo

Institut Pasteur

Accounting for heterogeneity in mosquito exposure is necessary to forecast chikungunya outbreaks in Reunion Island

14:40-15:05

Fernando Saldana

INRAE

Multiscale Modeling of Vector-Borne Diseases: The Role of Dose-Dependent Transmission

15:05-15:30

Jonathan Bastard

INSERM, ANSES, and Sorbonne Université

Mapping the bird reservoir potential for West Nile virus in Europe and its relationship with disease occurrence in humans

15:30-16:00

COFFEE BREAK

SESSION 4 (*Chairs: Lulla Opatowski & Intila Yalikun*)

16:00-16:25

Pourya Toranj Simin

INSERM and Sorbonne Université

Impact of the human contact network on the selective advantage of emerging viral variants

16:25-16:50

Boxuan Wang

INSERM and Sorbonne Université

An analytical method to calculate epidemic threshold within spatial structure

16:50-17:15

Natalie Olson

Université de Montpellier

Simulating Zoonotic Spillover in the Context of Extractive Industrial Land Use Change

17:15-17:40

George Shirreff

Université Claude Bernard Lyon 1

Respiratory hospitalisations with Human Metapneumovirus (MPV) – how many cases are unidentified?

17:40-19:00 POSTER SESSION

Conference dinner

Location: Restaurant Papa Poule 23 rue des Taillandiers, 75011 Paris

Friday 14 NOV

SESSION 5 (*Chairs: Nathanaël Hozé & Anne-Andrée Ruiz*)

9:00-9:35

Samuel Alizon

CNRS and Collège de France

Phylodynamics: extracting epidemiological information from microbial sequence data

9:35-10:00

Clarisse Schumer

INSERM, Université Paris Cité, and Université Sorbonne Paris nord

Viral dynamics of the Respiratory Syncytial Virus during experimental human challenge infections: insights for transmission and protection

10:00-10:25

Lisa Crépin

INSERM, INRIA, and Université de Bordeaux

Regularized estimation in high-dimensional mechanistic models

10:25-11:00

COFFEE BREAK

SESSION 6 (Chairs: Paolo Bosetti & Paul Petit)

11:00-11:25

Juliette Paireau

Institut Pasteur and Santé publique France

An ensemble model for real-time forecasting of seasonal influenza epidemics in France

11:25-11:50

Shrichand Bhuria

INSERM, CNRS, EHESP, and Université de Rennes

Modelling the Spread of Healthcare-Associated Infections through a Nationwide Patient-Based Network in France's Healthcare Settings

11:50-12:15

Elise Hodbert

Université de Nantes and CNAM

Reconstructing healthcare networks from patient transfer data: a systematic review

12:15-12:40

Maria Alexa

INSERM, Institut Pasteur, and Université Paris-Saclay

Modelling the acquisition of extended-spectrum beta-lactamase (ESBL)-producing Escherichia Coli in neonates in Madagascar households.

12:40-14:00

LUNCH BREAK

End at 14:00

POSTERS

Aupépin Chloé et al.	Quantifying the impact of bacterial vaccines against antibiotic resistance: the importance of accounting for transmission and selection dynamics
Brault Antoine et al.	Reconstructing SARS-CoV-2 antibody dynamics and estimating correlates of protection against infection
Charniga Kelly & al.	Heterogeneity in activity levels explains changes in transmission advantage of SARS-CoV-2 Alpha variant over time
Coustaury Camille et al.	Improving the Sentinelles Network's surveillance of acute respiratory infections in France using spatio-temporal Bayesian modelling
D'Ottavi Morgana et al.	Modelling the long-term effects of community-based tuberculosis screening strategies among people who use drugs
Duret Loréna et al.	Serological Evidence of Influenza Burden Variability in Connected vs. Isolated Communities in Madagascar
Edbrooke Frith et al.	The geography of antibiotic resistance
Gonzalez Julia et al.	Animal-human interactions: a nationwide study on direct contacts in the general population
Guijarro Matos Ana et al.	Pediatric Emergency Room Activity an Early Indicator of Seasonal Respiratory Hospitalization
Kalahasti Suprabhath et al.	Foundation models for time series forecasting and policy evaluation in infectious disease epidemics
Nahmani David et al.	Optimal instant releases for population replacement with Wolbachia in a time-periodic environment
Seurat Jérémy et al.	Modeling within-host Staphylococcus aureus dynamics in the human nasal microbiota

- Schneider
Camille et al. **Understanding antibiotic resistance transmission within and between humans in Klebsiella pneumonia and Escherichia coli – a theoretical modelling study**
- Suhanda Ilona
Eveline et al. **Understanding behavioural and environmental factors associated with the risk of human tick bites using seasonal survey data**