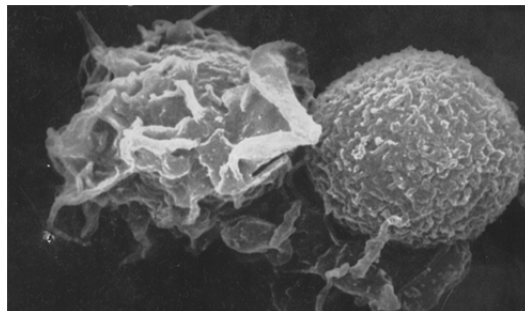


INNATE IMMUNITY and INFECTIOUS DISEASES



PROGRAM 2016-2017

INNATE IMMUNITY AND INFECTIOUS DISEASES

COURSE

(from April 10 to April 25, 2017)

This two and half week long course offers lectures on the players and on the mechanisms of the innate immune system and inflammation involved in the defense of the host against pathogens. It also offers lectures on the new tools allowing to study of the immune system.

After the discovery of phagocytosis, 135 years ago by Elie Metchnikoff, innate immunity underwent a rebirth following the discovery of the “pattern recognition receptors” awarded by the Nobel Prize in 2011.

The understanding of the mechanisms that control infectious insults have been deciphered these last years, and a precise role of each of the players is now better understood.

Not only innate immunity is common to all animal species, but for those which also have at their disposal an adaptive immunity, the contribution of innate immunity is a prerequisite for its involvement.

Most recently, a memory in innate immune system has been described and contributes to better innate and adaptive responses.

This course is aimed to offer the most up-dated information on the cellular and molecular players of innate immunity, and on the mechanisms that lead to the elimination of the pathogens, either of bacterial, viral, fungal or parasitic origin.

Because innate immunity is closely intricated with inflammation, the involvement of innate immunity with diseases will also be addressed.

Finally, up-to date tools to study the innate immune system will be presented

Co-directors

Jean-Marc CAVAILLON
Unit Cytokines & Inflammation
Institut Pasteur, Paris

Daniel SCOTT-ALGARA
Unit Cytokines & Inflammation
Institut Pasteur, Paris

Monday, 10 April

9:00 - 9:45	Welcome	Registrar's office
	General Introduction	Jean-Marc Cavaillon & Daniel Scott-Algara (Institut Pasteur, Paris)

Historical Background

9:45 - 10:30	From miasma to bacteria & Once upon a time inflammation	Jean-Marc Cavaillon (Institut Pasteur, Paris)
--------------	---	---

CELLULAR PLAYERS

10:45 - 12:00	Macrophages	Jean-Louis Mège (Faculté de médecine Aix-Marseille)
13:45 - 15:00	Neutrophils	Margarita Hurtado (Inserm, Faculté de Médecine, Bichat, Paris)
15:15 - 16:30	NK cells	Daniel Scott-Algara (Institut Pasteur, Paris)
16:45 - 18:00	NKT cells	Maria Leite de Moraes (Univ. Paris-Descartes, Paris)

Tuesday, 11 April

9:00 - 10:15	Innate lymphoid cells	Gérald Eberl (Institut Pasteur, Paris)
10:30 - 11:45	T γ/δ cells	Marc Bonneville (INserm, Université de Nantes)
13:45 - 15:00	Th17 cells	Xxxx Xxxx (xxx)
15:15 - 16:30	Treg cells	Laurence Weiss (AP-HP, Hôpital Pitié-Salpêtrière, Paris)
16:45 - 18:00	Dendritic cells	Anne Hosmalin (Inserm, Paris)

Wednesday, 12 April

9:00 - 10:15	Mast cells	Salah Mecheri (Institut Pasteur, Paris)
--------------	------------	---

MOLECULAR PLAYERS

10:30 - 12:00	PAMPs	Jean-Marc Cavaillon (Institut Pasteur, Paris)
14:00 - 15:30	DAMPs (alarmins)	Lionel Apetoh (Inserm, UMR, Dijon)
15:45 - 17:15	Innate Immunity in insects	Bruno Lemaître (Ecole polytechnique fédérale de Lausanne)

Thursday, 13 April

9:00 - 10:30	PPRs: TLR	Jean-Marc Cavaillon (Institut Pasteur, Paris)
10:45 - 12:15	PPRs: NLR	Catherine Werts (Institut Pasteur, Paris)
14:00 - 15:30	PPRs: RLR	Eliane Meurs (Institut Pasteur, Paris)
15:45 - 17:15	Scavenger receptors	Francisco Lozano (Hospital Clinic de Barcelona, Barcelone)

Friday, 14 April

9:00 - 10:30	Complement system	Loubka Roumenina (Inserm, Centre de recherche des Cordeliers, Paris)
10:45 - 12:15	Cytokines	Jean-Marc Cavaillon (Institut Pasteur, Paris)
14:00 - 15:30	Chemokines	Sofie Struyf (University of Leuven, Leuven)
15:45 - 17:15	Anti-microbial peptides	Jean-Michel Sallenave (Inserm, Hôpital Bichat, Paris)

Tuesday, 18 April

INTERACTIONS HOST - PATHOGENS

9:00 - 10:30	Anti-infectious role of cytokines	Jean-Marc Cavaillon (Institut Pasteur, Paris)
10:45 - 12:15	Mucosal innate immunity	Nadine Cerf-Bensussan (Inserm, Institut Imagine, Paris)
14:00 - 15:30	Innate immunity and viral infections	Daniel Scott-Algara (Institut Pasteur, Paris)
15:45 - 17:15	Innate immunity and fungal infections	Oumaima Granet (Institut Pasteur, Paris)

Wednesday, 19 April

9:00 - 10:30	Innate immunity and parasitic infections	Gerald Spaeth (Institut Pasteur, Paris)
10:45 - 12:15	Microbial strategies against the immune system	Geoffrey L. Smith (University of Cambridge, Cambridge)
14:00 - 15:30	Innate immunity and bacterial infections	Philippe Sansonetti (Institut Pasteur, Paris)

REGULATION OF THE INNATE IMMUNE RESPONSE

15:45 - 17:15	Epigenetic control of innate immune response	Alberto Mantovani (Istituto Clinico Humanitas, Milan)
---------------	--	---

Thursday, 20 April

9:00 - 10:30	Nervous system regulation of immune response	Monique Lafon (Institut Pasteur, Paris)
10:45 - 12:15	Links between innate and adaptive immunity	Matthew Albert (Genentech / Institut Pasteur, Paris)
14:00 - 15:30	Microbiota and immune system	Ivo Bonneca (Institut Pasteur, Paris)
15:45 - 17:15	Resolution of inflammation by lipid mediators	Mauro Perretti (Queen Mary University, London)

Friday, 21 April

9:00 - 10:30	Evolutionary genetics of the human innate immune system	Lluís Quintana-Murci (Institut Pasteur, Paris)
10:45 - 12:15	Innate immunity memory	Jessica Quintin (Institut Pasteur, Paris)

INNATE IMMUNITY, INFLAMMATION and DISEASES

14:00 - 15:30	Sepsis & Inflammation	Jean-Marc Cavaillon (Institut Pasteur, Paris)
15:45 - 17:15	Bowel diseases	Mathias Chamaillard (Institut Pasteur, Lille)

Monday, 24 April

9:00 - 10:30	Lung inflammatory disorders	Lhoussaine Touqui (Institut Pasteur, Paris)
10:45 - 12:15	Cancer: NK cells: from receptors to the cure of high risk leukemias	Lorenzo Moretta (Pediatric Hospital Bambino Gesù, Rome)

STUDYING INNATE IMMUNE SYSTEM

14:00 - 15:30	Parameters influencing the immune response and its study	Jean-Marc Cavaillon (Institut Pasteur, Paris)
15:45 - 17:15	Visit of the Museum	

Tuesday, 25 April

9:00 - 10:00	Monitoring of immune cells in vivo	Philippe Bousso (Institut Pasteur, Paris)
10:15 - 11:15	Organs-on-chips	Samy Gobaa (Institut Pasteur, Paris)
11:30 - 12:30	Single cell technology and High-throughput analysis	Fabrice Porcheray and Christophe Vedrine (Bioaster, Paris)
14:00 - 15:30	EXAM	
15:45 - 17:15	EXAM	

INNATE IMMUNITY AND INFECTIOUS DISEASES COURSE

2016 - 2017

ADDRESS DETAILS

CO-DIRECTORS

Mr Jean-Marc CAVAILLON
Cytokines & Inflammation Unit,
Institut Pasteur
25-28, rue du Dr Roux
75 724 Paris Cedex 15
France

Phone +33-(0)1 45 68 82 38
Email jean-marc.cavaillon@pasteur.fr

Mr Daniel SCOTT-ALGARA
Cytokines & Inflammation Unit,
Institut Pasteur
25-28, rue du Dr Roux
75 724 Paris Cedex 15
France

Phone +33-(0)1 45 68 82 13
Email Daniel.scott-algara@pasteur.fr

LECTURERS

Matthew Albert
Department of Cancer Immunology, Genentech
& Immunobiology of Dendritic Cells Unit
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15 France

Email albert.matthew@gene.com

Lionel Apetoh
ERC Team leader,
INSERM UMR866,
Centre Georges François Leclerc,
Université de Bourgogne, Dijon, France

Email lionel.apetoh@yahoo.fr

Ivo Gomperts Bonneca
Unité Biologie et Génétique de la paroi bactérienne
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email ivo.gomperts-boneca@pasteur.fr

Marc Bonneville
INSERM U892
Centre de Recherche en Cancérologie Nantes - Angers
Institut de Biologie
9 quai Moncousu
44035 Nantes Cedex 01, France

Email Marc.Bonneville@univ-nantes.fr

Philippe Bousso

Unité Dynamique des réponses immunes
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email philippe.bousso@pasteur.fr

Nadine Cerf-Bensussan
UMR_S1163 : Laboratoire d'Immunité Intestinale
Unité de recherche : INSERM UMR_S1163
Institut Imagine - Université Paris Descartes
Laboratoire d'Immunité Intestinale
24 boulevard du Montparnasse
75015 Paris, France

Email nadine.cerf-bensussan@inserm.fr

Mathias Chamaillard
Nods-like receptors in infection and immunity
Center of Infection and Immunity of Lille
Institut Pasteur
1 Rue du Professeur Calmette,
59000 Lille, France

Email mathias.chamaillard@pasteur-lille.fr

Mr Gerald Eberl
Unité Microenvironnement et Immunité
Département d'Immunologie
Institut Pasteur,
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email gerard.eberl@pasteur.fr

Samy Gobaa
IRT Bioaster
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email samy.gobaa@pasteur.fr

Oumaïma Granet
Unit Cytokines & Inflammation
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email ogranet@pasteur.fr

Anne Hosmalin
Infection Immunity and Inflammation Department
and Antigen Presentation by Dendritic Cell Team
INSERM Unit 1016, UMR CNRS 8104, Paris-Descartes University
Institut Cochin
Bâtiment Gustave Roussy 8ème étage
27, rue du Faubourg Saint Jacques
75014 Paris, France

Email anne.hosmalin@inserm.fr

Margarita Hurtado-Nedelec
Département d'hématologie et d'immunologie
UF Dysfonctionnements Immunitaires
HUPNVS Bichat-Claude Bernard
48 rue Henri Huchard
75018 Paris, France

Email maria.hurtado-nedelec@aphp.fr

Monique Lafon

Unité Neuro-immunologie virale
Département Virologie
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email monique.lafon@pasteur.fr

Maria Leite-de-Moraes

INEM (Institut Necker Enfants Malades) - INSERM U1151, CNRS UMR8253,
Univ. Paris Descartes
Necker Hospital
Hamburger Building – 5th Floor
149, rue de Sèvres
75 015 Paris, France

Email maria.leite-de-moraes@parisdescartes.fr

Bruno Lemaitre

Global Health Institute
EPFL-GHI-SV-UPLEM- Station 19
CH-1015 Lausanne, Switzerland

Email bruno.lemaitre@epfl.ch

Francesco Lozano

Institut d'Investigacions Biomèdiques August Pi i Sunyer
Servei d'Immunologia, Hospital Clínic de Barcelona
Departament de Biologia Cel·lular, Immunologia i Neurociències,
Universitat de Barcelona,
08007 Barcelona, Spain

Email flozano@clinic.ub.es

Alberto Mantovani,

Humanitas University
Istituto Clinico Humanitas
Via Manzoni 56
20089 Rozzano, Milano, Italy

Email alberto.mantovani@humanitasresearch.it

Salah Mécheri

Unit Biologie des Interactions Hôte-Parasite
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex, 15 France

Email salah.mecheri@pasteur.fr

Jean-Louis Mège

Laboratoire d'Immunologie - Hôpital de la Conception
APHM Assistance Publique Hôpitaux de Marseille,
Faculté de Médecine de Marseille, Aix-Marseille University,
Marseille, France

Email jean-louis.mège@univ-amu.fr

Eliane F. Meurs

Unité Hépacivirus et Immunité Innée
Institut Pasteur
28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email eliane.meurs@pasteur.fr

Lorenzo Moretta

Director, Immunology Area,
Director Dept Laboratories
Pediatric Hospital Bambino Gesù
Viale San Paolo, 15
00146 Rome, Italy

Email lorenzo.moretta@opbg.net

Mauro Perretti

Centre for Biochemical Pharmacology, The William Harvey Research Institute
Barts and The London School of Medicine and Dentistry
Queen Mary University of London
Charterhouse Square, London EC1M 6BQ, UK
Email m.perretti@qmul.ac.uk

Fabrice Porcheray
IRT BIOASTER
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France
Email fabrice.porcheray@bioaster.org

Lluis Quintana-Murci
Scientific Director Institut Pasteur
Head of Unit Génétique Evolutive Humaine
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France
Email lluis.quintana-murci@pasteur.fr

Jessica Quintin
Unité Immunologie des infections fongiques
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France
Email jessica.quintin@pasteur.fr

Loubka Roumenina
Sorbonne Universités, Université Pierre et Marie Curie (UPMC)
Unité Mixte de Recherche en Santé (UMRS 1138),
Centre de Recherche des Cordeliers,
75006 Paris, France
Email roumenina@gmail.com

Jean-Michel Sallenave
Inserm, U1152, Hôpital Bichat,
and Université Paris-Diderot, Sorbonne Paris Cité,
46 Rue Henri Huchard,
75018 Paris, France
Email jean-michel.sallenave@inserm.fr

Philippe Sansonetti
Collège de France &
Unité Pathogénie Microbienne Moléculaire
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France
Email philippe.sansonetti@pasteur.fr

Geoffrey Smith
Department of Pathology,
University of Cambridge,
Tennis Court Road,
Cambridge CB2 1QP, UK
Email gls37@cam.ac.uk

Gerald Spaeth
Unité Parasitologie moléculaire et Signalisation
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France
Email gerald.spaeth@pasteur.fr

Sofie Struyf

Department of Microbiology and Immunology,
Rega Institute for Medical Research,
University of Leuven,
Minderbroedersstraat 10,
3000 Leuven, Belgium.

Email sofie.struyf@rega.kuleuven.be

Lhousseine Touqui

Département Infection et épidémiologie
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email lhousseine.touqui@pasteur.fr

Christophe Vedrine

IRT Bioaster
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email christophe.vedrine@bioaster.org

Laurence Weiss

Unit of Clinical Immunology
Hôpital Européen Georges Pompidou
20 rue Leblanc
75 015 Paris, France

Email laurence.weiss@aphp.fr

Catherine Werts

Unité Biologie et Génétique de la paroi bactérienne I
Institut Pasteur
25-28 rue du Docteur Roux
75 724 Paris Cedex 15, France

Email catherine.werts@pasteur.fr
